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Prehistory Research Series

THE C. L. LEWIS STONE MOUND

and the

STONE MOUND PROBLEM

By

JAMES H. KELLAR

INDIANA HISTORICAL SOCIETY
INDIANAPOLIS

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PREFACE

One of the major archaeological interests of the Indiana Historical Society has been the low slab burial mounds that formerly were frequent on the hilltops in southeastern Indiana. This study, a lengthier version of which was submitted as a Ph.D. dissertation in anthropology at Indiana University, 1956, is an outgrowth of that concern.

The specific stimulus was the excavation of the C. L. Lewis Stone Mound in 1951-52. Because of voiced and published statements suggesting that stone mounds were themselves culturally diagnostic and because the Adena identification for the Lewis Mound appeared to provide a good datum for evaluating such contentions, an extensive compilation of data was undertaken. As it developed, the Lewis Mound was concluded to have little relevance to the larger problem; but in view of recent divergent statements regarding stone mounds in the Ohio Valley, the excavation report was permitted a wider scope than might have been the case under other conditions.

The writer makes no pretense of having solved the "stone mound problem" in all its dimensions. Nor is this solution imminent. Therefore, an attempt has been made to provide as full a bibliography as possible in order that others interested in stone mounds may have ready access to the information. Obviously, not all sources are of equal value; but all indicate distribution and some relate to archaeological content.

Many individuals have contributed to the study. The writer is particularly indebted to Charles L. Lewis of St. Paul, Indiana, who, when destruction of the stone mound was threatened, got in touch with responsible state officials, making possible a systematic investigation by the Indiana Historical Society. The co-operation of the Lewises included not only permission to excavate, but such hospitalities as Thanksgiving dinner for a tired, cold, and muddy crew in 1951.

Glenn A. Black was in over-all charge of the excavation; but travel difficulties and other obligations precluded his regular attendance at the site. The writer was in charge of the field crews.

Except for the early summer of 1952, the excavation of the mound was largely a "weekend" activity requiring an 150-mile round trip between Indiana University and the site. Despite interruptions of as long as three months, the excavation was never seriously disturbed. This is not the usual excavation experience, and the writer sincerely appreciates the co-operation of the community.

The majority of the field labor was supplied by students in anthropology, Indiana University. Special reference is due Dr. John Clauser, then a student at the Indiana University Medical School, who maintained a consistent interest as indicated by his availability.

Robert Burton and Downey Davis, both of Indiana University, provided transportation for field parties and tools and equipment, respectively.

Upon the initiation of efforts to accumulate more data regarding stone mounds than was available in the archaeological literature, letters of inquiry were sent to several individuals requesting relevant information. Also, a trip was made in January and February, 1956, to several institutions in the South and East to study field notes and collections pertaining to stone mounds. The following made such information available: Ellis Crawford and Robert Moody, Barringer Museum, Covington, Kentucky; William J. Mayer-Oakes and Don W. Dragoo, Carnegie Museum, Pittsburgh; Ralph Dury, Cincinnati Museum of Natural History; Marvin F. Kivett, Nebraska State Historical Society; Raymond S. Baby, Ohio State Museum; J. O. Brew and Robert Greengo, Peabody Museum of Archaeology and Ethnology, Harvard University; Alfred K. Guthe, Rochester Museum of Arts and Sciences; Carl F. Miller, Smithsonian Institution; Charles K. Peacock, Chattanooga Chapter, Tennessee Archaeological Society; Arthur R. Kelly, University of Georgia; William S. Webb, University of Kentucky; Carl H. Chapman, J. M. Shippee, and Richard A. Marshall, University of Missouri; John L. Champe, University of Nebraska; Joffre L. Coe, University of North Carolina; T. M. N. Lewis and Madeline Kneberg, University of Tennessee.

To all the above the writer acknowledges his obligation for the freely given assistance, which sometimes necessitated excursions into the dark, dusty, and almost forgotten recesses of dead storage.

There are those who provided the opportunity to undertake this project. The Indiana Historical Society supported the excavation of the C. L. Lewis Stone Mound. Eli Lilly, through the Society, made it possible to devote the winter of 1955-56 to the study. Glenn A. Black, whose excavations of the Burkam Stone Mounds are an important cornerstone in the interpretation of the central Ohio Valley material, reflected his continued interest in the problem by making available bibliography and serving as advisor. If the finished product is less than their hopes for it, it is the fault of the writer and not due to any lack of support on their part.

Thanks are also due Gerald B. Huff, Dean of the Graduate School, University of Georgia, for release from some teaching time for revision of the original study.

JAMES H. KELLAR

The University of Georgia

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PART I

THE C. L. LEWIS STONE MOUND

THE LOCALE

The C. L. Lewis Stone Mound was located near the south edge of the village of St. Paul, in Shelby County, Indiana, approximately thirty-five miles southeast of Indianapolis.

Topographic relief is minimal throughout this portion of the state except where creeks and rivers have cut into the underlying bedrock. When this has occurred, comparatively deep and precipitous stream channels have resulted and these are bordered by narrow terraces. The Lewis Mound was situated on such a terrace 400 feet from Flat Rock River and 45 feet above it at low water. The terrace on which the tumulus had been constructed was about 300 feet in width, and to the north and east it sloped gradually upward to a ridge of low sandy hills.

Although the mound was not on a natural eminence, the very gradual topographic rise beginning at the precipitous river channel edge on the opposite side permitted an excellent view of the countryside from the mound site.

THE PREHISTORIC CONTEXT

No prior systematic archaeological excavations had been undertaken in the immediate area of the mound, although a surface survey of Shelby County was completed in 1949. Both Adena-Hopewellian and Fort Ancient components were recognized and the Lewis Mound was assumed to be related to the former.[1]

Approximately one-quarter mile southwest of the Lewis Mound there was formerly another mound, but it had been destroyed some years earlier incident to the expansion of a limestone quarry. Oral reports regarding the content of the mound were in conflict. Dragoo reports the following: "This site . . . once produced vast quantities of materials. In a low mound one central burial with a number of other burials radiating out in 'spoke-fashion' were uncovered. Some of the burials were removed but the greatest percentage of them was destroyed. Bracelets and beads of native copper were found, but these have been lost."[2]

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[1] Dragoo, Don W., *Archaeological Survey of Shelby County, Indiana* (Indiana Historical Bureau, Indianapolis, 1951).

During the excavation of the Lewis Mound, several informants indicated that other burials had come from a limestone fissure in the same area. These, too, had been discovered by quarry operators. Besides copper, pottery was said to have been present. These, like all such oral reports, are difficult to evaluate after a lapse of many years separates them from the event they attempt to describe.

Shortly after the excavation of the stone mound had been completed, heavy earth-moving equipment uncovered an adult skeleton in the low hills about 400 yards to the west. These remains were covered with an extremely heavy deposit of red ochre, and a large circular shell gorget had been placed with the body. This accidental find is suggestive of Glacial Kame, although outside its usual area of occurrence.

In addition to the data noted above, the archaeological survey map of Noble Township locates two campsites in the immediate vicinity as well as two low earth mounds slightly more than a mile to the west.[3]

No single site in the area exhibited any marked occupational concentration, judged from surface evidence. However, thin Woodland campsites and mounds were scattered along the river and the stone mound offered the opportunity to salvage some of the potential of the region. It, too, might have been destroyed except for the foresight and co-operation of Mr. Lewis.

THE HISTORY OF THE MOUND

The recognition of the Indian origin of the mound may predate 1887. A history of Shelby County published in that year reports the following: "The only earthworks by prehistoric man were seen adjoining the village of St. Paul. A mound thirty-two feet in diameter, and nearly six feet high, is built on the brow of the terrace bluff, overlooking the river valley and commanding a wide view toward 'sunrise' between the rocky hills. When explored it contained human bones, which on exposure, quickly went to dust. They were covered with flags, supported by a stone wall, indicating a national vault or grave. Several smaller tumuli, possibly habitation mounds, were seen near by."[4]

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[2] *Ibid.*, p. 16

[3] *Ibid.*, p. 9

It cannot be stated with assurance that the above has specific reference to the Lewis Mound, but the suggested location and general description make it appear likely. The excavation referred to may have been one undertaken more than seventy years ago by Dr. Frank Howard and Benjamin Jenkins, a druggist, both of St. Paul. The probable extent of their exploration will become apparent in the body of the report. It need only be said at this juncture that the damage was major, although it remains questionable whether their efforts were extensive enough to permit description

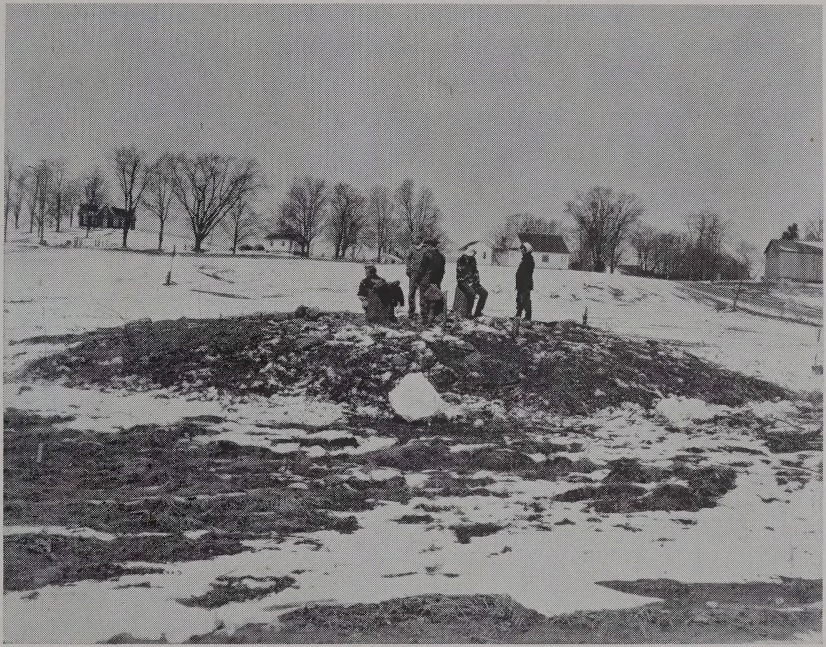

PLATE I. The C. L. Lewis Stone Mound

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[4] *History of Shelby County Indiana* (Chicago: Brant & Fuller, 1887), p. 266.

of the internal structure of the mound. Nevertheless, the above description does approximate the conditions found upon excavation.

The mound apparently was not much disturbed in recent years. Although the field adjacent to it was frequently searched for artifacts, only two relatively small holes in the top of the mound indicated efforts to explore the interior. The difficulties associated with removing tightly packed slabs frequently encased by roots and the

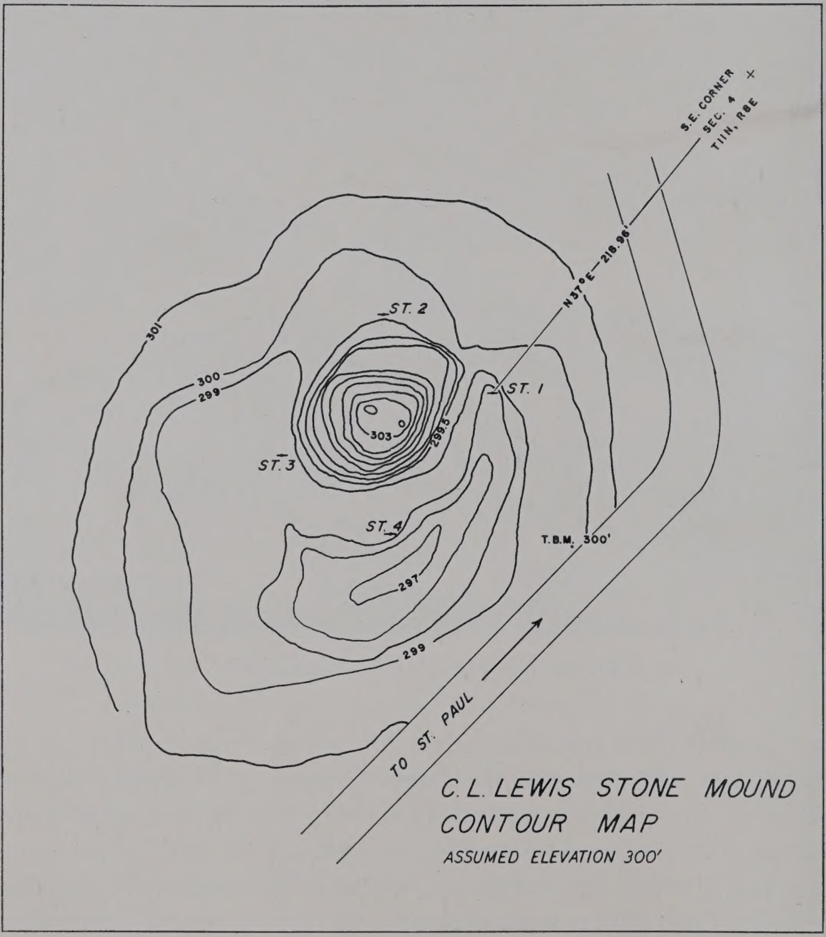
S.E. CORNER
SEC. 4
T11N, R8E
N37°E—218.96'
301
300
299
ST. 2
ST. 1
ST. 3
ST. 4
303
299.5
297
299
T.B.M. 300'
TO ST. PAUL
C.L. LEWIS STONE MOUND
CONTOUR MAP
ASSUMED ELEVATION 300'

Figure 1.

general paucity of artifacts were probably sufficient deterrents to any wholesale destruction.

There was even some doubt expressed as to the prehistoric origin of the mound when some of the local residents were questioned. It was suggested that the pile of stones had resulted from field-clearing operations. Glacial activity in the area frequently made such efforts a necessary prelude to cultivation. And certainly the top of the mound was covered with granite boulders of varying sizes that undoubtedly had been carried from the field. However, the placement of the mound fifty feet from the fence row with a resultant loss of cultivatable ground and the presence of large limestone slabs made this suggestion doubtful. The first hour of excavation settled any doubt there might have been regarding the origin of the stone pile.

The Excavation

Previous to the arrival of the work party the mound had been cleared of accumulated brush and two trees had been removed by the owner. This greatly expedited the initiation of actual exploration, although it remained to remove three inches of snow that had fallen the previous night. (Plate I)

Because the surface was covered with stone, except for an accumulation of sod around the basal portion, it was obviously impossible to stake it in the usual fashion. Therefore, a rectangular area measuring 65 by 50 feet was established with the aid of a transit (Fig. 1). Stakes were positioned at each of the corners and numbered consecutively through four, beginning at the southeast corner and proceeding counterclockwise. Stakes were also placed on the 20-foot and 30-foot lines on the short side and at 32.5 feet on the long side of the rectangle. These provided ten permanent reference points for triangulation.

A grid system was established on paper for plotting significant archaeological features.

Excavation was begun along the 1-4 line with the aim of establishing a vertical profile at the 20-foot line. Shovels were employed initially, but these were useless once the real concentration of slabs was reached. (Plate II) At this point, trowels were used to clean away the accumulated humus and the limestone was removed after noting placement. This method was followed whenever slabs were dealt with and was dictated by the experience of others with mounds of this nature. Stone mounds have been noted to contain internal structures defined by lithic fill. Also, quantities of calcined and broken unburned human bone were sometimes placed between the slabs. The Lewis Mound proved no exception to these earlier observations and the relatively slow progress was justified by the material results.

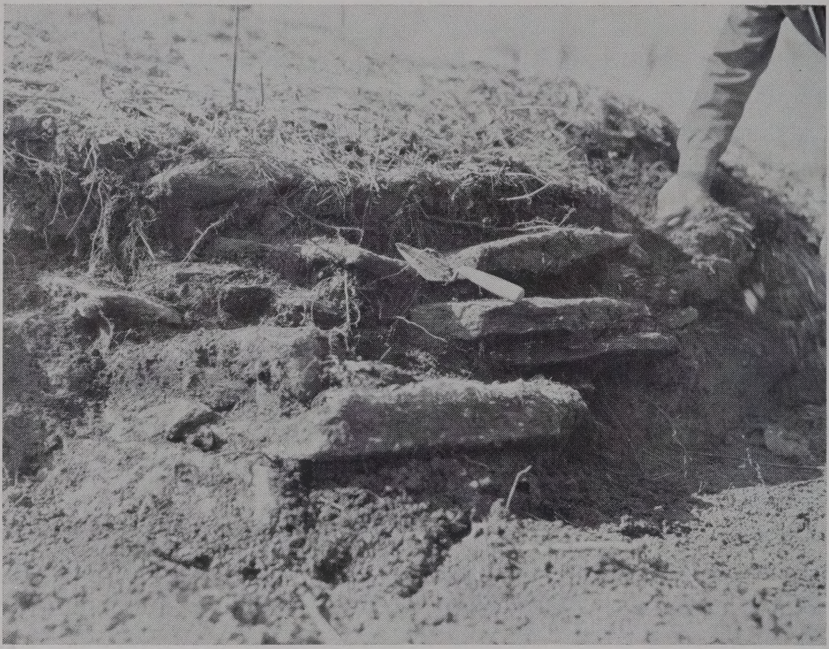

Plate II. Limestone Fill

A working floor was established a few inches beneath the lowest level of slabs. Although this datum was not in undisturbed subsoil, the choice of levels was dictated by several factors. Foremost of these was the consideration that work was to be carried on sporadically, and the preservation of the sub-floor features under these conditions is difficult. Also, there was the possibility of there being village debris beneath the mound, and it was felt that more could be derived if such a situation was dealt with as a unit rather than segmented. As it developed, this measure proved unnecessary.

After the 20-foot profile had been completed, excavation was continued toward the 30-foot line. However, it became apparent that some internal structure was being approached near the center of the mound mass. Therefore, no further attempts were made to complete this cross-section. Rather, the excavation was continued so as to isolate the central area by removing the slabs around the periphery and some of the fill from above. At the same time, as many of the slabs were left in place as was necessary to define the internal structural feature.

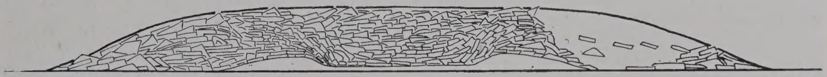

Figure 2. Mound Cross Section Idealized

After the central feature was described, it was removed down to the working floor. The latter was then taken down the remaining six inches into undisturbed subsoils, and troweling of the resultant surface completed the excavation of the mound.

As was pointed out above, the continuity in the course of the excavation left much to be desired because work could only be carried on over weekends and during university vacation periods. One frequently arrived at points of great interest only to leave them for days or sometimes weeks. At other times, excavation was continued under the most adverse weather conditions.

The rather difficult circumstances under which some of the excavation was accomplished and the inability to devote long unbroken periods to the work, except during the spring of 1952, no doubt had some detrimental effect on the quality of the accumulated data. However, no apology is made; much more was derived than would have been if observations had been made behind a bulldozer.

MOUND STRUCTURE

The C. L. Lewis Stone Mound was a low dome-shaped structure which exhibited three major building phases: 1) a central circumvallation made of earth; 2) a mantle of limestone slabs placed over the preceding and following its configuration; and 3) the addition of more slabs to bring the mound to its final form (Fig. 2). The first two of these were associated with major mortuary activities of the mound's builders.

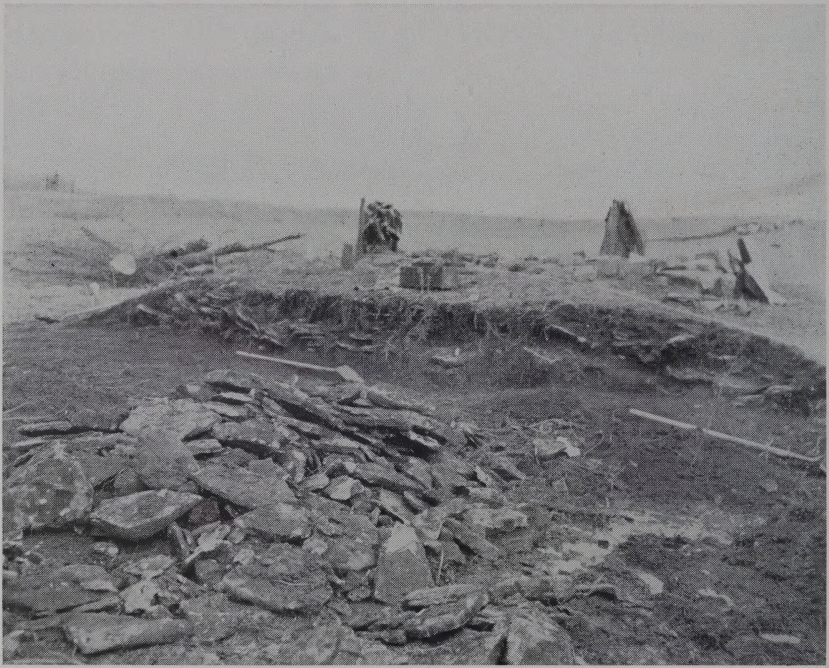

PLATE III. "Face" of Mound in Background and Slabs which Have Been Removed, Giving an Indication of the Relative Abundance of Stone Making Up the Mound

The mound mass measured approximately 55 feet by 50 feet by 4 feet. When completed, it contained two-thirds stone and one-third earth.[5] A small portion of the latter consisted of decayed organic material that had sifted between the slabs. A few granitic boulders were included; but the bulk of the structural stone was limestone, which had been carried up from the outcroppings along the Flat Rock River. (Plate III)

Mound construction had taken place on a slight rise on the terrace. The floor, at least in the central section, had been cleared before the first stages of construction began; but the peripheral areas contained some broken chert and a few sherds. These materials were scattered, however.

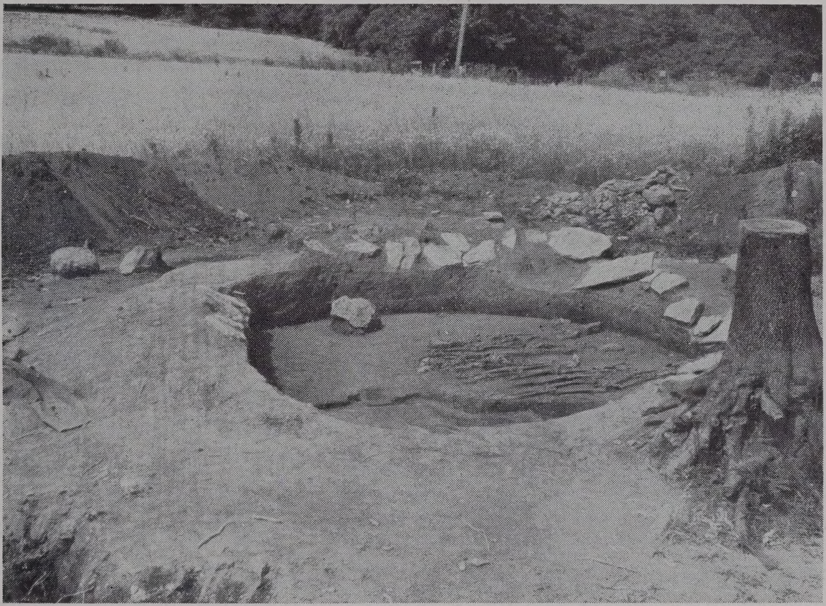

Plate IV. Central Area with Burials

The initial structural phase was a low earthen embankment somewhat elliptical in shape. (Plate IV) Because of modern excavations the configuration was difficult to follow, particularly along the southern border. However, the internal diameter approximated

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[5] Dragoo, *Archaeological Survey of Shelby County*, p. 14, gives differing figures for the composition of the mound; but his published estimate was obtained before the internal make-up was fully delineated.

12 feet where two opposite margins remained in place with the external dimensions twice this. The height of wall had an average elevation of 21 inches; it was somewhat higher to the west and a good deal lower to the east.

Twelve burials had been placed on the floor within the embankment and charred grass and twigs covered these remains. This layer was separated from the burials by a thin layer of soil in some sectors; it was in direct contact with the bones in others. It was also noted that two layers of charred material were sometimes present with earth separating them. Two other burials were within the feature limits.

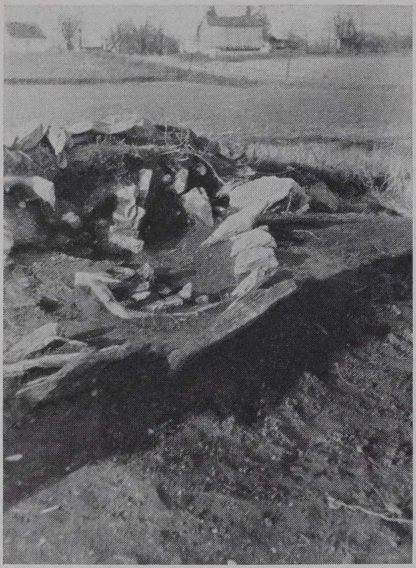


Plate V. Slabs Outlining Crematory Area

The fact that one of the burials (Burial 34) was partially beneath the earthen ring and some of the slabs that lined the feature, suggests that the construction of the ring followed the placement of the burials. Because of the previously noted disturbances, the sequence is not clear.

After the completion of this structural phase and the placement of some limestone slabs around the interior of the circumvallation, about four inches of sandy soil was deposited over the burned layer. More slabs were carried to the central section and placed on the floor and around the margins. Most of these flat water-worn stones were of a size to be handled by one man, but a few would have required some assistance to move from the river outcroppings.

This activity resulted in the formation of a slab-lined depression directly above the mass burial. (Plate V) The slabs within this area were oxidized and friable resulting from an intensely hot fire. Fire-checked human bone fragments and smoke-blackened human bones, some still articulated, were found in this feature. Without question, cremation of human remains had taken place *in situ.*

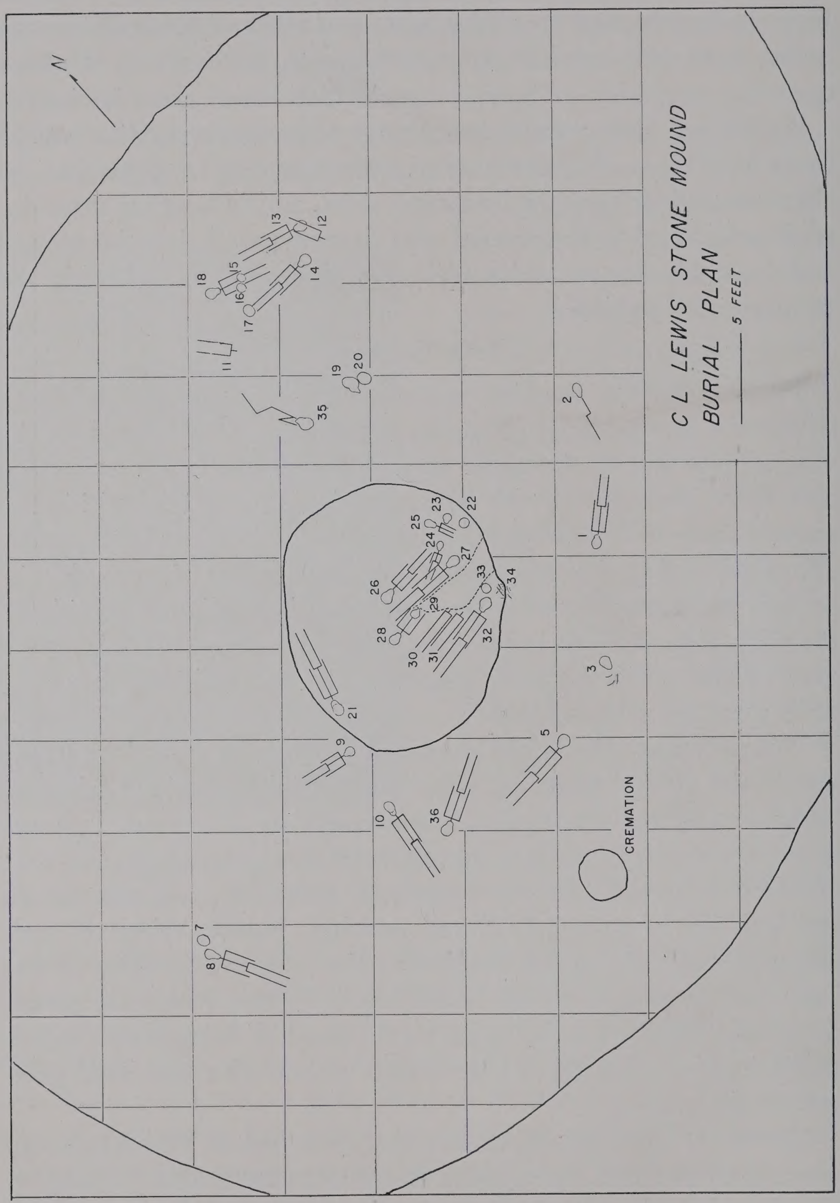
Additional slabs were subsequently added to bring the mound to its final form. The presence of human burials in stone cists, on the mound floor beneath limestone slabs, and in another mass deposit peripheral to the central area demonstrated that the mound had accreted over an undetermined period of time following the primary construction.

THE BURIALS

Human skeletal remains were found in a variety of locations within the mound mass (Fig. 3). Several had been placed on the mound floor and on the upper surface of the earth circumvallation and were then covered with slabs. One had been placed within the mass of earth which defined the central area. Fourteen burials were deposited within the area defined by this feature. A second mass deposit was encountered to the north and immediately outside of the ring. Two small caches of human bones were given burial numbers (4 and 6) in the early stages of the excavation. Other such finds were not given numbers.

Not only were the burial remains encountered at various places within the mound mass, but these also exhibited a wide variety of burial procedures. Thirty-six inhumations were recovered. Twenty-three of these were primary inhumations of which twenty-one were dorsally extended, one was ventrically extended, and one was on the left side in a slightly flexed position. Bundle reburials were sometimes hard to define because of the poor preservation of the bone, but four such burials were noted. In two instances, partial skeletons exhibiting articulation were recorded. Also, seven human skulls had been placed in the mound without the associated post-cranial skeleton.

Cremated human remains were also encountered. Fire-blackened articulated remains were found in the crematory area formed by the tipped slabs. A secondary deposit of calcined fragments had been placed on the mound floor south of the central area.


C L LEWIS STONE MOUND
BURIAL PLAN
5 FEET
N
CREMATION
1
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35
36

Figure 3.

Aside from these major points of interest, human bone, both calcined and uncalcined, were found throughout the mound mass. There seemed to be a studied effort on the part of the mound's builders to scatter fragmentary human remains throughout the mound fill and to place broken pieces of human bone between the slabs. These ranged in size from splinters and teeth to major sections of the long bones and sometimes skulls. Although some of these undoubtedly resulted from earlier attempts at exploration, several occurrences were accompanied by carbon materials and could not have been moved without disturbing these.

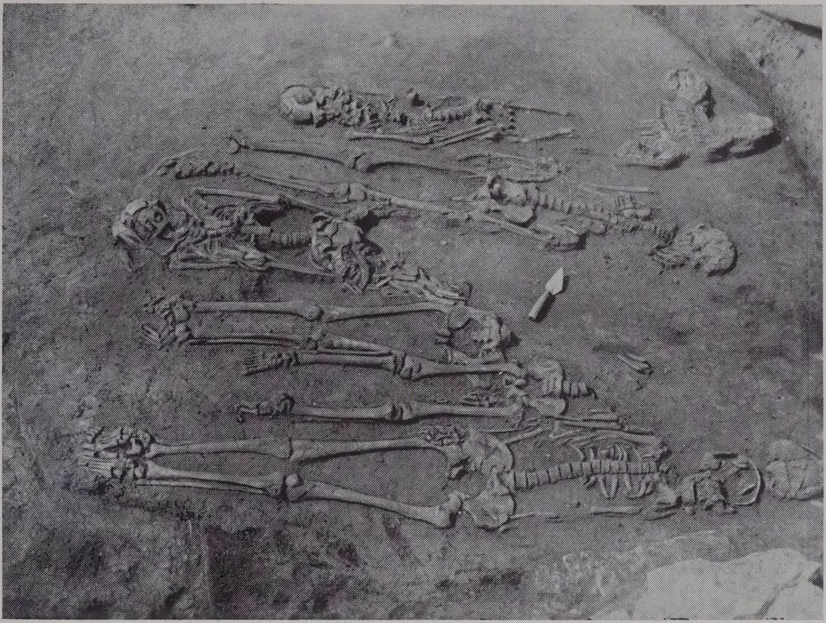

PLATE VI. Burials in Central Area

The mound, though small, contained a surprising number of burials and exhibited complexities not commensurable with its small size.

Table I summarizes burial remains, their context within the mound, and the artifact associations. No detailed examination of the skeletal material has been undertaken and the age classification

Continued p. 382

Table 1. Burial Data

Number	Orientation	Position	Age	Mound Context	Artifacts
1	SW	extended	child	mound base	
2	NNE	extended	child	mound base	
3		secondary?	juvenile	mound base	
4		cache of human bones		between slabs	
5	E	extended	adult	mound base	chisel, 2 projectile points, chert hammerstone
6		cache of human bones		between slabs	
7		(skull)	adult	small stone cist	
8	WNW	extended	adult	stone cist	
9	E	extended	child	surface of embankment	
10	N	extended	adult	surface of embankment	
11		partial articulation	adult	concentrated on mound floor	
12	SSE	partial articulation	adult		
13	E	extended	adult		2 copper beads, copper "ring," copper "sheath"
14	E	extended	adult		
15		(skull)	adult		
16		(skull)	adult		
17		(skull)	adult		
18	W	extended	adult		

Table 1. Burial Data, *cont.*

Number	Orientation	Position	Age	Mound Context	Artifacts
19		(skull)	adult	together on mound floor	
20		(skull)	adult		
26	S	extended	adult	central area	
21		extended?			
22	E	extended	infant		
23	E	extended	child		
24	W	extended	child		15 copper beads
25	W	extended	adult		3 bone combs, large chert blade
27	E	extended	adult		
28	W	extended	adult		
29	W	extended	adult		
30	E	extended	adult		
31	E	extended	adult		
32	E	extended	adult		
33		skull?	adult		
34		secondary	adult		
35	SE	flexed	adult	mound floor	antler drift, 2 beaver incisors
36	SW	extended		mound floor	

was made in the field. The generally poor preservation limited the number of recoverable specimens and the writer cannot guarantee that errors are absent.

The central area contained the greatest concentration of human remains. One secondary and thirteen primary burials had been placed within the area delimited by the earth walls. Previous excavations resulted in the partial destruction of six of the burials, but only in one or two instances did it severely restrict interpretation. (Plate VI) The outline of this modern intrusion was obvious, not only by reference to the skeletons, but by the nature of the material making up the content of the trench fill. Uncalcined bone from the lower level was redeposited in the crematory area and vica versa.

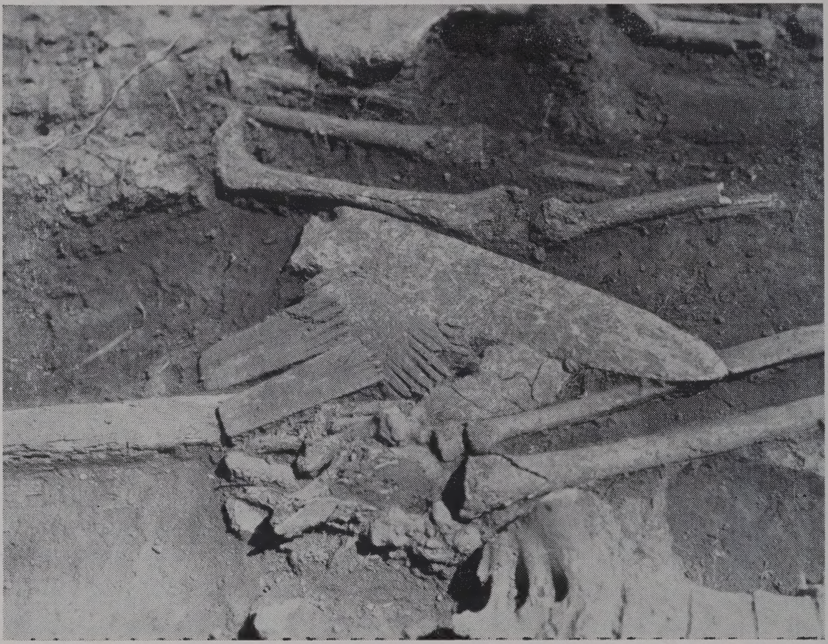
Plate VII. Blade and Bone Combs, Burial 26

At the northeastern corner of the concentration were the remains of an infant, Burial 23, and two children, Burials 24 and 25. The three were directly associated with one another and probably had been deposited at approximately the same time. Burial 24 had been placed on the floor level and Burials 25 and 23 followed in that order. All were superimposed over the lower extremities of Burial 26.

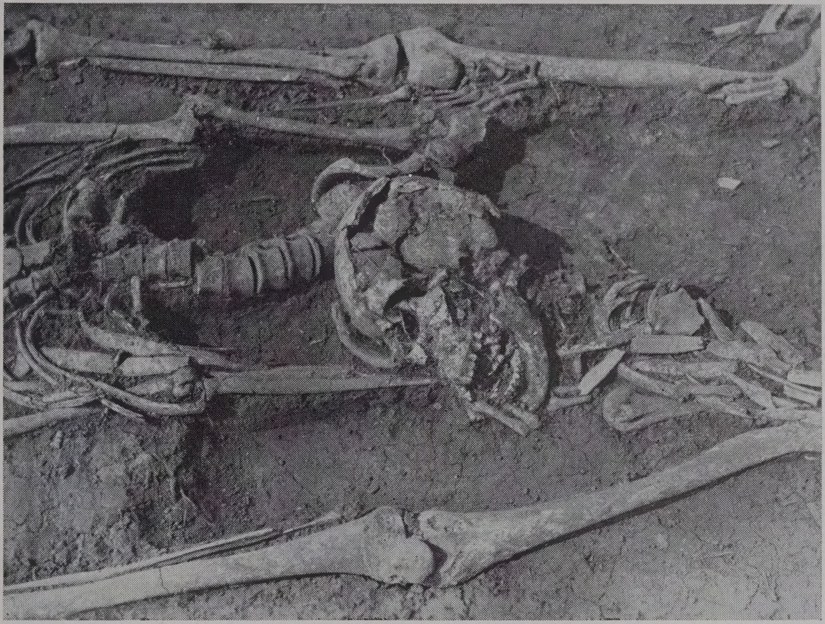

Plate VIII. Burials 28 and 29

At the right shoulder of Burial 25 were fifteen copper beads. Their position relative to one another indicated they had been strung, and some fragments of the cordage were preserved. The earth around the beads was stained a deep brown and the residue was soft and pulpy to the touch, suggesting that the copper artifacts had been in or rested on some organic material. Scattered evidence of red ochre was also observed.

To the west and south were seven adult burials, all extended, all lying parallel to one another. These were numbered serially from north to south: Burials 26, 28, and 29 were oriented to the west, Burials 27, 30, 31, and 32 to the east. Numbers 27 through 32 had all been disturbed by the intrusion, but the degree of disturbance varied.

Burial 26 was the only one of these that had associated artifacts. At the right hip were three bone combs and a long corner-notched flint blade. One of the former lay over the shaft of the right femur, and all three combs were in direct contact with one another. Partially beneath the combs with the tip resting on the right radius was the blade. The right ilium partially covered the artifact collection. (Plate VII)

Burial 27 had been slightly disturbed by the trench and the left humerus and left side of the rib cage had been removed. The skull was badly flattened from the weight of a granite boulder, one of the few in the mound, which rested directly on it.

Burial 28 was probably that of an adult female. Resting in the pelvic opening was a skull, Burial 29. (Plate VIII) The intruded trench had removed the lower limbs of the former and only a few broken ribs and a portion of the right humerus remained of the latter, but it seems reasonable to assume that both had been complete burials at the time of deposition.

Only a few vertebrae, pelvis, and legs and feet remained of Burials 30 and 31, but it is also likely that they were entire before the trench disturbed the area.

Burial 32 was that of an adult male. Disturbance was minor. Near the left arm was a large limestone slab in a horizontal position on the same level as the burials.

Burial 33 was a badly crushed skull whose position made it unlikely that it was associated with any of the other mutilated skeletons. It may have been deposited with a secondary burial concentrated some ten inches to the east; but in view of its lack of direct association, it was given a separate number.

Burial 22 consisted of a flattened skull to the north of the intrusion with the tibiae and feet to the south. A secondary burial (Burial 34) had been placed over the tibiae and feet of the preceding. These skeletal remains had been carefully piled and included some ribs, right and left humeri, right and left scapulae, right and left radii, a few disarticulated vertebrae, and a mandible.

There is no question that the burial had been redeposited after the flesh and connecting tissue had decomposed or been removed. (Plate IX)

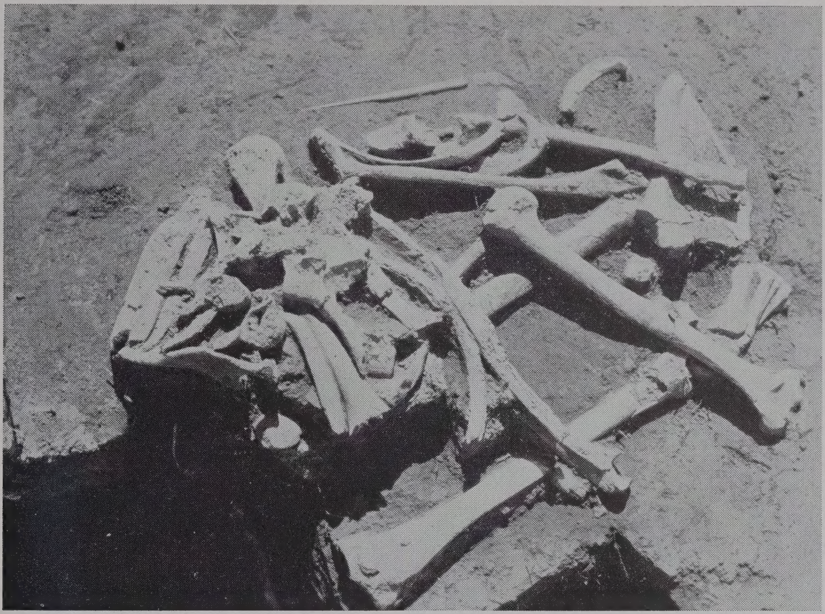

PLATE IX. Burial 34

Four large limestone slabs defined the westerly edge of the central depression. At the lower edge of these and partially beneath one was the extended burial of an adult male, Burial 21. (Plate X) The left ilium was more than six inches higher than the right ilium, and the pelvic area seemed somewhat contorted, leading to the suspicion that there had been the collapse of some mound feature. This was not confirmed by excavation, and it is assumed that the burial followed the general contour of the earth on which it lay.

A limestone slab lay at the distal ends of the tibiae and fibulae of Burial 21. Although the areas above and below this slab were minutely inspected, no trace of the feet could be found, and it can only be concluded that they had been removed sometime prior to burial. This confirmed observations made on at least two other burials; but preservation was poor in these latter examples, raising some doubt as to the accuracy of the conclusion.

As noted previously, the basin-shaped structure formed by the placement of the limestone inside and over the circumvallation was the site of a crematory fire. The slabs gave evidence of having been exposed to an intensely hot fire and most were bright orange in color as a result of oxidation. Others were calcined and powdery and easily fragmented. The accompanying earth was a mixture of light wood ash, charred wood, and much calcined bone. Also in the deposit were some unburned bone and unmodified mound earth. These raised some interpretive problems, but the situation became clear when the modern trench was clearly delimited. The precise area of crematory involvement could not be accurately defined because of the intrusion, but the heaviest concentration of burned materials were along the 30-foot line in the central portion of the mound.

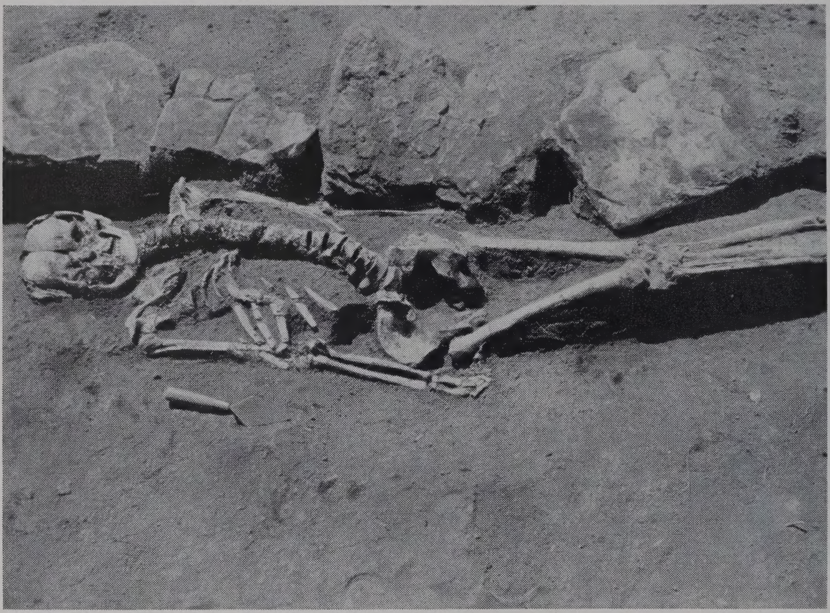

PLATE X. Burial 21, an Extended Inhumation which Had Been Placed on the Edge of the Central Subfloor Burial Pit

Some of the human skeletal remains had not been as completely calcined as many of the smaller pieces found in the deposits. The surfaces of the former were only fire blackened and were not warped or heat checked. Articulation was still preserved in several examples: acetabular fossa, femur, and tibia; portions of a vertebral column; ulna, radius, and left hand. A large piece of charred wood was located a few inches north and parallel to above.

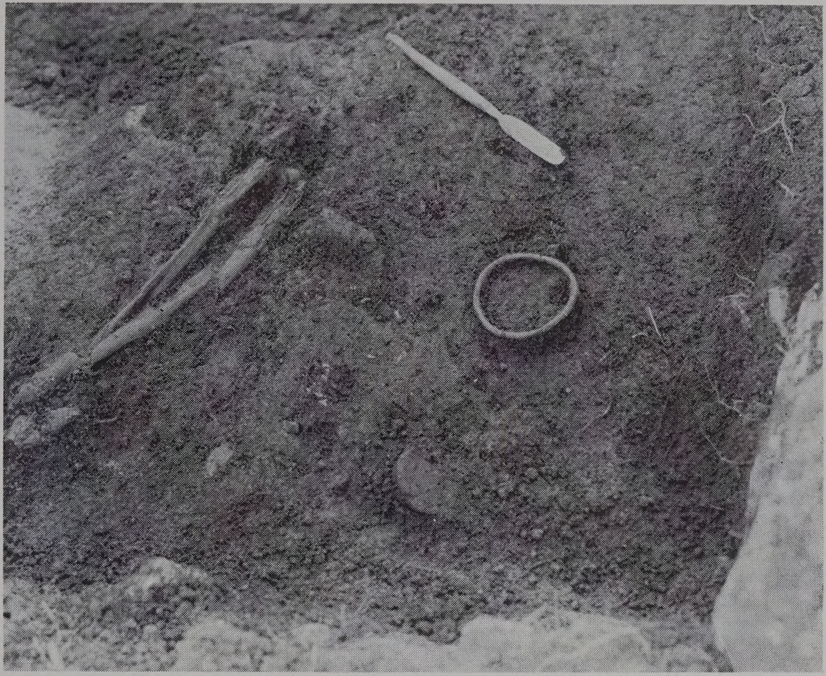

PLATE XI. Copper Bracelet *in situ* in Upper Central Area Containing Partial Cremation

It was necessary to close down the excavation of this level during the winter of 1951-52, and even though the area was protected, some freezing did occur. As a consequence, further fragmentation did take place.

In the spring remains of at least two persons were recovered. A few artifacts were removed. A C-shaped copper bracelet was found a few inches from the fire-blackened lower left arm, but there was no suggestion of firing on the artifact. The distal end of a bone awl from the same area had been exposed to heat. A single disc shell bead came from between two of the calcined slabs as did a charred bit of organic material associated with it. A small fragment of mica might have originated from a micaceous stone rather than been carried in as part of an artifact. With the disturbance that had taken place, it is quite possible, even probable, that the bracelet was originally with the burials on the floor in the central tomb. (Plate XI)

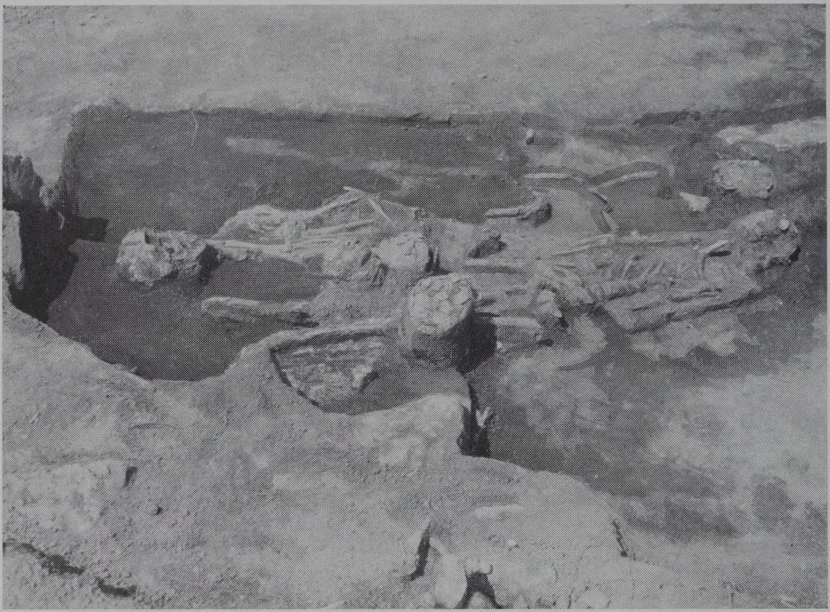

Plate XII. Burials 13-18, inclusive, on North Side of Mound

A third concentration of human remains was located north of the central area on its periphery. (Plate XII) This particular section of the mound, in contrast to other peripheral areas, was almost devoid of stones. When first noted, the condition suggested more "pot-hunting," but this was not the case.

There was no indication of a well-defined structure surrounding the burials. The slabs toward the edge of the tumulus lay flat on the old ground surface as in the other marginal areas. To the south and west, the limestone slabs followed the contour of the earth ring. This would indicate that this feature had been made after the central area had been constructed. It should be made expressly clear that there was no definition approaching that of the central area, however; the most that can be stated is that a region in the mound was devoid of stones, and human remains were deposited in this hollow which was later filled with earth.

The absence of stone above the burials made this portion of the mound a natural sump for ground moisture. As a result, the bone was in very poor condition. Also, roots tended to concentrate in the moist soil and many had grown through the burials. An early summer storm and rodent activity further complicated a not-too-simple picture. The situation was as follows:

Three burials were extended on the approximate mound floor. Burial 13 was the most northerly of the group and was placed face down with the head oriented to the east. Two beads and a copper "ring" were associated with the left mastoidal area. The skull was crushed and a mole had uprooted the facial portion. Among the disturbed bones a small copper object was found, which was originally associated with an upper incisor. Although displaced at the time of discovery, the copper artifact fitted over the tooth to form a sheathlike covering and the tooth was also heavily stained. A concentration of calcined bone was directly beneath the skull.

Burial 14 lay parallel to the above and was similarly oriented. Foetal bones were present in the pelvic cavity. A root had grown through the skull and facial bones were completely destroyed.

Burial 18, an adult male, lay opposite the above with legs partially superimposed over Burial 14.

Three skulls were positioned directly above the latter two extended burials and were separated from them by a few inches of earth. Burial 17 was the best preserved of the three and was the remains of an adult male. It lay on the right side facing easterly, directly above the distal end of the left femur of Burial 14. The other two skulls, 15 and 16, were in contact and situated above the pelvis of Burial 18. Both mandibles had been removed.

About six feet southeast of this concentration and at a slightly higher elevation were two more skulls. Burial 19 lay on the left side facing east. Burial 20 rested on its base; the cranial cap had been removed prior to its disposal. Neither had associated mandibles. (Plate XIII)

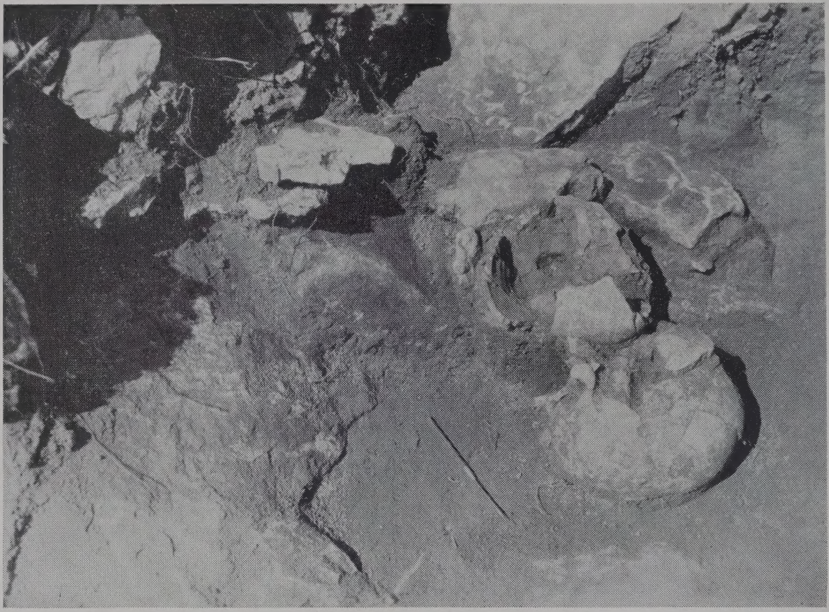

PLATE XIII. Burials 19 and 20

Burial 12 was articulated, but consisted of only a few vertebrae, pelvis, femora, tibiae, and fibulae. The feet had been removed, and there was no indication of modern disturbance. This burial, oriented south-southeast, was directly above Burial 13, and the skull of the latter protruded between the femora of the former.

Burial 11 was similar to the above except that a few broken ribs were found in the pelvic cavity. It was at least six inches higher than the bulk of the other associated skeletal remains and somewhat removed from them.

Immediately above the area of greatest concentration were two human mandibles, the right ascending ramus of one having been broken off before placement.

The earth surrounding this deposit was relatively free of cultural materials and gave little evidence of having been obtained from a village or campsite. Much of it was clean sandy clay. However, two sherds were found near the 30-foot line and calcined bone was scattered throughout, both above and beneath the burials. Apart from the burned bone, there was no evidence of charcoal, burned clay or stone, or any other residue that would have resulted from a crematory fire. A few widely scattered slabs, mostly lying at the same level of the extended burials, were present, and a single large slab was in a more or less vertical position at the west end of the deposit. These were exceptional, however.

Most of the other burials exhibited no unusual features, but a few warrant some description.

Burial 5 was located a few feet south of the central area directly beneath the largest tree on the mound and was badly disturbed by root growth. The arms, hands, and feet were absent; but the natural disturbance could account for this, although the mound exhibited burial details which set some precedent for the occurrence. A diorite chisel, two projectile points, one straight stemmed and the other with stem broken, and a chert hammerstone were placed precisely between the knees of the individual.

The proximal end of a left femur and a portion of a left ilium were recovered from beneath a large slab ten feet southwest of the central area (Burial 6). Midway between the proximal end and broken shaft of the femur and extending outward was a black deposit, apparently charred organic matter. The deposit ran beneath the bone and partially encircled it. Although the association was near one of the pits in the mound, there was no indication that previous excavation had disturbed it. The limestone slabs were solidly packed and large, and the charred material was in an unbroken mass in such a position as to deny any disturbance. Intentional placement is indicated. The breaks in the long bone were old ones, and there is no question that this was a partial burial, that the flesh was gone at the time of placement, and the bone was broken before deposition. Other similar occurrences were noted, but this example made the point most explicitly.

Burial 8 was somewhat atypical insofar as placement was concerned. Fifteen feet west of the central area large limestone slabs had been placed on the mound floor so as to form a shallow trough. The body of an elderly female was placed in this depression and more slabs enclosed the receptacle. A broken projectile point was found near the right tibia, but the placement may not have been intentional. At the head of the burial and slightly to the left was a large limestone slab in an approximate verticle position with some slight tipping to the north. In the cist formed by the tipping the skull of an adult male had been deposited. (Burial 7)

Burial 35 was within the earth forming the northern boundary of the circumvallation. Whereas all the previous articulated burials had been extended, this one was placed on the left with legs partly flexed at the knees and with the arms tightly folded with the hands at the chin. It was oriented to the southeast. Between the ribcase and the right humerus was a poorly preserved antler drift. The point of the latter rested on the shaft of the humerus. Two beaver incisors were positioned parallel to the shaft of the left fibula.

A secondary deposit of cremated human bone was situated on the mound floor near the southern periphery of the structure. Heavy deposits of calcined bone were found mixed with bits of charcoal and small quantities of burned clay. Included in this mass was a broken expanded-center gorget. A portion representing about two thirds of the whole was found initially. The remainder was located about seven inches away. The two pieces were readily joined together at their respective fractures and there is no question that the artifact had been intentionally broken before placement. Further excavation resulted in the finding of three C-shaped copper bracelets and seven copper beads. The artifacts bore no indication of firing and must have been deposited subsequent to the cremation of the human remains.

The Artifacts

The bulk of the artifacts recovered were either in association with primary inhumations or with secondary deposits of cremated human bones. Of the former, only five primary burials had accompanying artifacts. However, the burial accompaniments are important because they point without exception to an Adena relationship.

Artifacts of chert include two projectile points, a hammerstone, and a large blade. (Plate XIV) The points are roughly chipped. One is 71 mm. in length and 28 mm. wide at the shoulder and is straight stemmed. The base of the other is broken but it was probably stemmed in a fashion similar to the above. Both have slightly excurvate sides. The chert hammerstone is roughly spheroid, and its roughened surface gives evidence of having been used as a striking tool. The three artifacts were found with Burial 5.

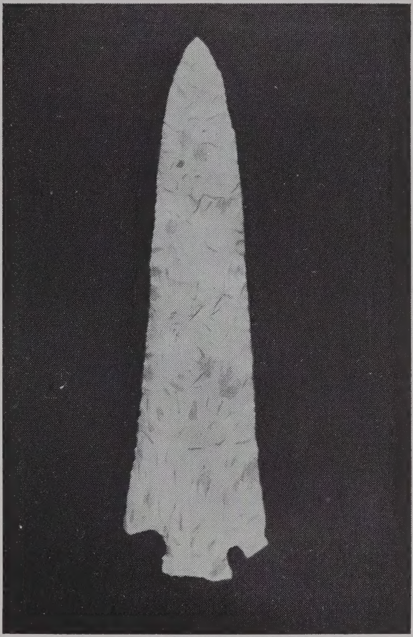

PLATE XIV. Chert Blade, Over-all length 222 mm.

The large blade exhibits exceptionally fine workmanship. The material from which it was chipped is light pink in color and is unlike any of the cherts or chalcedonies from any of the better-known aboriginal quarries. It is 222 mm. long, 75 mm. wide at the shoulder, and is corner notched with sides gently excurvate with some slight constriction in the central portion. All edges are sharp and the notches are unworn, suggesting it had not been used for utilitarian purposes.

Ground-stone objects include a diorite chisel and a banded-slate expanded-center gorget. The former is 97 mm. long, 12 mm. wide across the bit, and 25 mm. broad in the central section. The gorget is the diagnostic Adena form. It is plano-convex in cross section, and the two perforations, drilled from the flat side, are 39 mm.

apart between centers. The whole is 147 mm. in length, 43 mm. across the expanded center, and 16 mm. wide on the ends. (Plate XV)

The beaver incisors, antler drift, and broken bone awl require no further description, but the bone combs are sufficiently rare to warrant description. (Plate XVI)

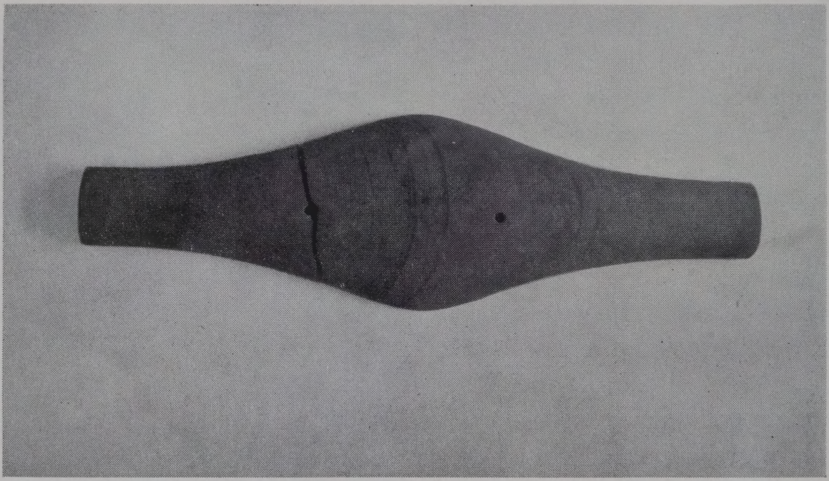

Plate XV. Expanded-center Gorget, Over-all length 147 mm.

The three combs and the large blade were found together with Burial 26. The dimensions of the combs are as follows:

	No. 1	No. 2	No. 3
Length :	89 mm.	76 mm.	87 mm.
Width :	43 mm.	24 mm.	19 mm.
Number of tines:	10	5	6

Number 1 is the more massive of the three and is composed of two sections of bone, the smaller piece apparently having been attached to the larger with an adhesive. A hole had been drilled in the upper corner. The larger section had been beveled on one side to decrease the thickness and the teeth were formed in that area. The other two were made from single pieces of bone and were undrilled.

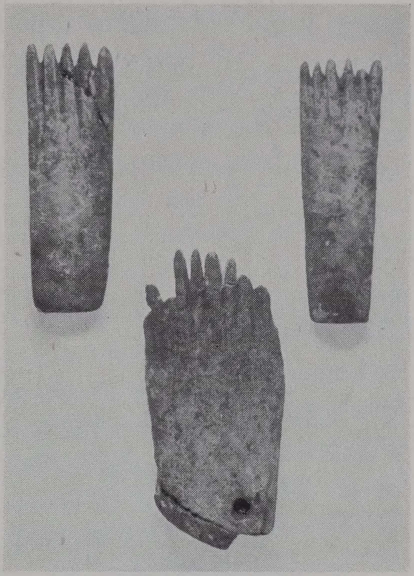

Plate XVI. Bone Combs

Copper artifacts constitute a significant part of the total assemblage and consist of four bracelets, twenty-six beads, a "ring," and a fragment found in association with an incisor of Burial 13. The bracelets are all "C-shaped," as is the ring. The latter's placement in the mastoidal region suggests an ear ornament rather than a finger ring. The copper beads from Burial 25 are all fairly massive, with the largest being 11 mm. in length, with a diameter of 12 mm. The others from the mound are generally little more than half that size. (Plates XVII and XVIII)

Artifacts from the mound mass without burial association were extremely few in number and hardly diagnostic in themselves. Some of these may have been removed from a burial context by recent disturbances, although a portion undoubtedly was gathered up when the earth ring was constructed. Artifacts from the fill include:

- Chert
  - 1 straight-stemmed projectile point
  - 5 broken projectile points
- Shell
  - 1 disc bead
- Pottery
  - 1 cord-marked clay-tempered sherd
  - 1 cord-marked grit-tempered sherd
  - 4 plain grit-tempered sherds

Wood
- 1 charred fragment, possibly drilled

The sherds from the site were somewhat eroded, but are clearly a generalized Woodland.

THE AFFILIATION OF THE C. L. LEWIS STONE MOUND

In attempting to search out the cultural relationship of the Lewis Mound, the predominance of flat limestone slabs in the fill is, of course, the initial definitive characteristic and is of little comparative value except as it relates to other mounds where like materials were used. Stone structural inclusions within the body of predominantly earth mounds are not unknown, but their relationship to the stone cairn is not obvious, at least on the basis of this single characteristic. Also, some features, i.e., deposition of fragmentary bone between slabs, could not occur where such material is absent. Such

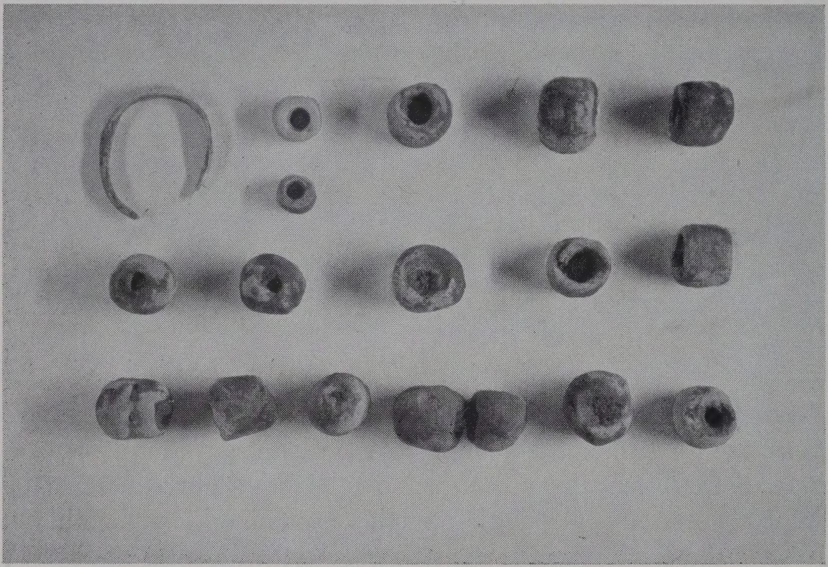

PLATE XVII. *Upper left:* Copper Ring, 19 mm. in width, and Disc Shell Beads. *Upper right and two horizontal rows:* Heavy Rolled-copper Beads, the fourth and fifth Beads from the Left in Bottom Row Being Joined by Fibers Intact in the Perforations

features have tended to place stone mounds in a separate cultural category and to blur their relationships with better-known archaeological concatenations.

The presence within the approximate center of the mound of a well-defined burial area finds analogies with almost all Adena and many Hopewellian tumuli. The occurrence of an earthen wall is a fairly frequent Adena feature. Such walls are often associated with the construction of subfloor log tombs and seemingly result from the removal of earth from the intruded pit. The dirt was deposited around the hole and was later covered by mound-building activities.

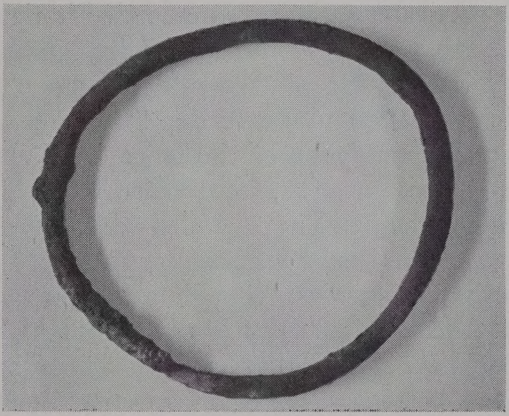

PLATE XVIII. Copper Bracelet, 62 mm. in width

Excavations at the Robbins Mound in Boone County, Kentucky, revealed thirteen prepared areas with no accompanying log casts.[6] Rather, burials, and they were not present in every instance, were placed inside an area delimited by low earth walls. The authors point out the absence of the subfloor element and conclude that the earth was carried in specifically for the embankment. It did not result from some other activity incidental to mound construction.

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[6] Webb, William S., and Elliott, John B., *The Robbins Mounds . . .* (The University of Kentucky, *Reports in Anthropology and Archaeology*, V, No. 5, Lexington, November, 1942), pp. 414-15.

This would seem to be comparable to the condition recorded at the Lewis Mound.

The Hartman Mound, another Kentucky Adena site, offers an interesting example of the use of limestone slabs on an embankment around a subfloor pit.[7] Although the Lewis Mound had no intruded pit, one phase of its construction was in every way comparable to the above.

In terms of these two examples, the central area at the Lewis Mound must be considered as representative of a type of Adena tomb. Further corroboration is found in the charred layer which covered the multiple burials.

Although the concentration of burials in the mound is somewhat unusual, particularly the seven extended burials in the central area, these too generally reflect the Adena inhumation influence: extended burials, "trophy" skulls, cremation and calcined human bone in association with extended burials, etc.

With the possible exception of the large chert blade which is, perhaps, more reminiscent of a Hopewellian form, all artifacts fit well into the Adena pattern. The expanded-center gorget, C-shaped copper bracelets, copper beads, and bone combs make such an identification conclusive. These last, though not common, have been found at the Adena Mound,[8] Ricketts Mound,[9] and Wright Mounds[10] in identical form and are sufficiently distinctive to indicate relationships between these four sites and the C. L. Lewis Stone Mound.

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[7] Webb, William S., *The Crigler Mounds . . . and the Hartman Mound . . .* (The University of Kentucky, *Reports in Anthropology and Archaeology*, V, No. 6, Lexington, August, 1943), pp. 536-38.

[8] Mills, William C., "Excavation of the Adena Mound," in *Ohio Archaeological and Historical Quarterly*, X, No. 4 (Columbus, 1902), fig. 22.

[9] Webb, William S., and Funkhouser, William D., *Ricketts Site Revisited . . .* (The University of Kentucky, *Reports in Anthropology and Archaeology*, III, No. 6, Lexington, April, 1940), pp. 223-24.

[10] Webb, William S., *The Wright Mounds . . .* (The University of Kentucky, *Reports in Anthropology*, V, No. 1, Lexington, September 1940), pp. 65-66, 109.

PART II

THE STONE MOUND PROBLEM

INTRODUCTION

Although references to the distribution, content, and possible significance of stone mounds or cairns are frequent in the archaeological literature, particularly for the middle and upper Ohio Valley, few attempts have been made to systematize the available data. This is in part the result of certain inherent deficiencies in the sites themselves.

Despite their extremely widespread distribution in the eastern United States, few stone mounds have escaped indiscriminate excavation. Although some of the structures were quite large, the great majority were small and this made them easy marks for the weekend excavator. Also, stone being a desirable building material, both large and small tumuli were a convenient source of supply for the builder's use, and many prehistoric stone heaps were incorporated in walls, chimneys, fences, and even larger construction projects.

Another restrictive factor was the frequent observation that stone mounds generally contained few artifacts. Human bone was often found in great quantity, but associations were rare. The various institutions sponsoring field activities in the late nineteenth and early twentieth centuries found them poor sources for building artifact collections. Consequently, they provided little data by which comparison could be made with the better-known earth mounds. Moorehead, after several weeks' work in Ohio stone mounds without much material reward for the expended energy, concluded: "It is certain that scientists can learn nothing more from them and further excavation of these small stone structures are unnecessary."[1]

While there are many references to stone cairns, most of them date from a period when field techniques left something to be desired and the reports lack the detail that is now found indispensable. A general statement may summarize the results of several weeks' work in stone mounds. There are no more than a dozen reports which meet a minimum critical standard.

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[1] Moorehead, Warren K., "Report of Field Work Carried on in the Muskingum, Scioto, and Ohio Valleys During the Season of 1896," in *Ohio Archaeological and Historical Society Publications*, V (Columbus, 1897), 214.

The generally disturbed condition of those stone mounds still extant, the seemingly inherent lack of artifact associations with the concomitant deterrent to systematic excavation, and the relatively few precise reports on those mounds excavated are important and critical restrictions. Nonetheless, the fact that less data may be present than desired emphasizes the importance of what is available and points up interesting and rewarding avenues for future archaeological research.

THE HISTORICAL BACKGROUND

An interest in stone mounds dates from the earliest European concern about aboriginal structures. Many of the first reports describing the visible features of aboriginal activity speculate about the construction, function, and purpose of these mounds. The usual practice at the descriptive level was to separate mounds on the basis of their structural content, either earth or stone, and differential explanations were then evoked for the two classes of tumuli.

Stone mounds were frequently regarded as monuments erected to commemorate the deeds of dead "warriors" whose remains might lie beneath slowly accumulating piles of stone. Although not based on excavated data, there was some precedent for this conclusion in the early historical accounts. Whether the practice is as widespread as the literature suggests, or whether the idea gradually became a part of local folklore in many areas, is indeterminable.

Adair's much-quoted statement regarding the Chickasaw is one of the earliest of these descriptions. He says:

> To perpetuate the memory of any remarkable warriors killed in the woods, I must here observe, that every Indian traveller as he passes that way throws a stone on the place, according as he likes or dislikes the occasion, or manner of death of the deceased.
>
> In the woods we often see innumerable heaps of small stones in those places, where according to tradition some of their distinguished people were either killed, or buried, till the bones could be gathered; there they add Pelion to Ossa, still increasing each heap, as a lasting monument and honor to them, and an incentive to great actions . . .

> The Indians place these heaps of stone where there are no dividings of the roads, nor the least trace of any road. And they then observe no kind of religious ceremony, but raise those heaps merely to do honor to the dead, and incite the living to the pursuit of virtue.[2]

Reference to similar practices in the Southeast are given by Lederer[3] and Lawson notes stone mounds "... being the monuments of seven Indians that were slain in that place by Sinnagers or Iroquois. Our Indian guide added a stone to each heap."[4]

A comparable origin for stone mounds is reported for the Schoharie Valley in New York in 1753[5] and the Livingston Manor Patent[6] provides additional confirmation.

Squier and Davis, discussing the same problem, add more to this delineation. They write:

> Heaps of similar character are found in the Atlantic States, where they were raised by the Indians over the bodies of those who met death by accident, or in the manner of whose death there was something unusual. Dwight, in his Travels, mentions a heap of stones of this description which was raised over the body of a warrior killed by accident, on the old Indian trail between Hartford and Farmington, the seat of the Tunxis Indians, in Connecticut. Traces of a similar heap still exist on the trail between Schenectady and Cherry Valley in New York, with which a like tradition is connected.[7]

On the basis of this early historical material, it is not illogical that similar explanatory devices were used for stone mounds in areas where documentation was lacking. However, some other lines of evidence were also employed.

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[2] Quoted in Swanton, John R., "Social Organization and Social Usages of the Indians of the Creek Confederacy," in U. S. Bureau of American Ethnology, *Annual Report*, 1924-25 (Washington, D. C., 1928), p. 391.

[3] Lederer, John, "The Discoveries of John Lederer," in *The First Explorations of the Trans-Allegheny Region by the Virginians, 1650-1674*, edited by Clarence W. Alvord and Lee Bidgood (Cleveland, Ohio, 1912), pp. 142-43.

[4] Lawson, John, *The History of Carolina, Containing the Exact Description and Natural History of that Country* . . . (Raleigh, 1860), p. 78.

[5] "A Letter from Rev. Gideon Hawley of Marshpee containing a Narrative of his Journey to Onohaghgwage in 1753," in *Documentary History of the State of New York*, edited by E. B. O'Callaghan, III (Albany, 1850), pp. 630-31.

[6] Butler, Eva L., "The Brush or Stone Memorial Heaps of Southern New England," in Archeological Society of Connecticut, *Bulletin 19* (April, 1946), p. 8.

[7] Squier, Ephraim G., and Davis, Edwin H., *Ancient Monuments of the Mississippi Valley . . . (Smithsonian Contributions to Knowledge*, I, Washington, D. C., 1848), pp. 184-85.

Atwater,[8] in the first attempted cataloguing of the many surface features, particularly those in Ohio, concludes that stone mounds were "altars" as well as "monuments." This conclusion was conditioned by a preoccupation with Biblical texts.

Squier's[9] discussion of the problem includes a reference to the Biblical context and also summarizes the world distribution of stone heaps. Local rationales are cited to explain the function of these tumuli among the Celtics and in India and Peru.

Beverly[10] has indicated that stones were piled over a hatchet by some Indian groups to symbolize the cessation of overt military action.

One of the most interesting discussions, if not the most enlightening, was the original explanation proposed by Brinkley.[11] Rather than being revered monuments, he suggests that stone mounds accumulated as a result of "detestation" and "scorn" for the individual beneath the rock pile. This resulted from a supposed violation of group mores and, as a consequence, the individual was stoned. The fragmentary bone noted in a stone mound near Dayton, Ohio, was thought to be the direct result of such practices. The scattered stones in the field around the mound were interpreted as resulting from poor aim.

Comments such as the above are, of course, not unusual for American archaeology in its earliest period. They represent a general grasping for explanations for which the frame of reference is myth, folklore, and gross analogy.

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[8] Atwater, Caleb, "Description of the Antiquities Discovered in the State of Ohio and Other Western States," in The American Antiquarian Society, *Transactions and Collections*, I (Worcester, Mass., 1820), pp. 166-67.

[9] Squier, Ephraim G., *Aboriginal Monuments in the State of New York (Smithsonian Contributions to Knowledge*, II, Article 9, Washington, D. C., 1849), pp. 157-69.

[10] Beverly, Robert, *The History and Present State of Virginia in Four Parts . . . By a Native and Inhabitant of the Place* (London, 1722), p. 164.

[11] Brinkley, C. H., "Ancient Stone Mounds—Were They Objugatory Burial Heaps," in *The American Antiquarian*, III, No. 3 (April, 1881), pp. 189-94.

It was sometimes assumed that there was a basic dichotomy between stone mounds. Squier and Davis [12] contrasted "rude heaps of stone" which were said to be numerous and others such as those on the hills overlooking Marietta and Portsmouth, Ohio, and Grave Creek in West Virginia. These latter were thought to be "signal or observation" mounds and related to the "mound builders." The former were not.

MacLean,[13] lifting without significant modification much of the discussion of Squier and Davis, felt obliged to add a bit and attributed the "rude accumulations" to the "Indians."

During the latter part of the nineteenth century there began to accumulate some statements based upon stone mound excavations. Most of these concerned the middle Ohio Valley. This resulted not from a distribution restricted to this geographical area, but rather from their location in this region which contained spectacular archaeological features.

Perhaps the most explicit statement as to the relationship of at least a portion of the small stone mounds was made by Moorehead. Caught up in the argument as to whether the rectangular slab-lined subsurface graves near Fort Ancient were of Shawnee origin, he was moved to contrast these with the similarly identified small stone mounds. Concerning the latter, he writes:

> There are hundreds of stone heaps in the Ohio Valley that cover the remains of Indians who fell in wars with the whites and among themselves in historic times. Such interments have unfortunately been classified with those of the stone grave people of far greater antiquity. We have never heard that objects of iron, glass, terra-cotta, or modern implements were found in any of these hollow or earth-filled stone graves. We are aware that modern implements and various utensils are frequently found in stone heaps near the many trails which penetrate different parts of the State.[14]

The source from which Moorehead obtained such an imposing array of obviously European trade goods is unknown.

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[12] Squier and Davis, *Ancient Monuments of the Mississippi Valley*, p. 184.

[13] MacLean, John P., *The Mound Builders . . .* (Cincinnati, 1893), p. 60.

[14] Moorehead, Warren K., *Primitive Man in Ohio* (New York and London, 1892), pp. 105-6.

Fowke,[15] too, found it necessary to comment on this problem. He suggested a difference between large and small stone mounds, with the former being alternatives to earth construction, but he was less certain about the affiliation of the latter. He points out that Thomas suggests the small stone mounds or cairns were Shawnee in origin, but Fowke failed to see any necessary relationship between these and the box graves. In fact, he felt that the great diversity in cairn construction argued against the Shawnee identification. However, there is an admittance that such variation could have developed "during a long period of quiet, unmolested occupancy." Implicit is the assumption that the slab-lined grave is earlier than the stone mound.

This particular phase of the developing interest in stone mounds is complicated by a lack of definitional precision. "Stone grave" is used by Fowke, and to some extent by Moorehead, to include both slab-lined pit graves and stone mounds. There is a conceptual difference, even though the latter may have included within it well-defined areas constructed of stone. Fowke sometimes refers to these as cairns, but there is no consistency in the application. This raises no great problem when descriptive material is given, but it presents impossible barriers when the discussions are generalized.

Moorehead[16] lumps together unlike structures under the same rubric. In the valley below Fort Ancient and within the limits of the site itself the typical box grave was found. On the terrace a few feet outside of the walls there were encountered piles of stone, some of which are reported to have contained "460 wagon loads." Both become stone graves. This cannot be attributed to a lack of observational acuity, because it has already been noted that the two types of archaeological phenomena had a differing significance for Moorehead.

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[15] Fowke, Gerald, *Archaeological History of Ohio . . .* (Columbus, 1902), p. 406; also Henry C. Shetrone, "The Culture Problem in Ohio Archaeology," in *American Anthropologist*, N. S., XXII, No. 2 (April-June, 1920), pp. 161-64.

[16] Moorehead, Warren K., *Fort Ancient, The Great Prehistoric Earthwork of Warren County, Ohio, Compiled from a Careful Survey with an Account of Its Mounds and Graves* (Cincinnati, 1890), pp. 37-38.

An interesting sidelight to this problem concerns the accumulation of survey data in Ohio. In a published breakdown of site information as of 1899, Moorehead lists the following:[17]

Mounds of stone not located upon high hills	43
Mounds of stone located upon high hills	13
Groups of stone graves not on high hills	135
Groups of stone graves on high hills	8

While the *Archaeological Atlas of Ohio* states that all earlier references were included after checking, only seventeen "stone graves" are listed for the whole of Ohio.[18] It is of interest to note that the stone graves pictured are the cairns excavated by Fowke in Brown County.[19] Also, only two such sites are listed for Adams County,[20] but Moorehead excavated and reported many more than that.[21] The "stone mound" category completely drops out of the classification.

Although some stone mound excavation was accomplished immediately after the turn of the century, much of it failed to produce a sufficient quantity of data to permit gaining any further insight into the problem. Setzler,[22] in 1930, reported on the excavation of three hilltop stone mounds in Franklin County, Indiana. Not only were these sites relatively unproductive of material, but the data obtained actually appeared somewhat contradictory. He concluded that each mound represented "a separate example of its type."

An archaeological survey in an adjacent county, Dearborn, resulted in the mapping of several similar sites. Stimulated by Setzler's earlier work and with a knowledge of some of the problems surrounding the tumuli, two of these were dug. One, Burkam Mound No. 1, produced a somewhat unique concatenation of material traits and a Woodland affiliation was strongly suggested.[23]

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[17] Moorehead, Warren K., "Report of Field Work in Various Portions of Ohio," in *Ohio Archaeological and Historical Society Publications*, VII (Columbus, 1900), 168-69.

[18] Mills, William C., *Archaeological Atlas of Ohio* (Columbus, 1914), p. iii.

[19] *Ibid.*, facing Map 8.

[20] *Ibid.*, facing Map 1.

[21] Moorehead, "Report of Field Work in the Muskingum, Scioto, and Ohio Valleys," in *Ohio Archaeological and Historical Society Publications*, V, pp. 209-14.

[22] Setzler, Frank M., *The Archaeology of the Whitewater Valley (Indiana History Bulletin*, VII, No. 12, Indianapolis, September, 1930), pp. 500-10.

In observing that the Osage were said to have constructed "stone cairns" over their dead in historic times and that these Siouan-speaking people may have moved westward from the Ohio Valley, Lilly[24] poses the query as to the possibility of a direct connection between stone mounds found in the latter area and those found in part of Missouri.

Other important excavation reports were published, particularly for Kentucky,[25] Pennsylvania,[26] and Tennessee,[27] but the writers generally deplored the lack of comparative material and nothing was accomplished in the way of an attempted summary.

Although presenting no detailed analysis, Griffin has been the most persistent in his efforts to suggest possible areas of relationship. Arranged chronologically, the hypotheses are as follows: 1) there is probably a basic cultural relationship between the stone slab mounds in the Ohio Valley and those found in the Missouri Valley; that these structures in the former region may occur early in Woodland and exhibit traits which may be ancestral to Adena and Hopewell;[28] 2) stone slab mounds fall within the Adena-

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[23] Black, Glenn A., *Archaeological Survey of Dearborn and Ohio Counties (Indiana History Bulletin*, XI, No. 7, Indianapolis, April, 1934), pp. 231-43.

[24] Lilly, Eli, *Prehistoric Antiquities of Indiana* (Indiana Historical Society, Indianapolis, 1937), p. 63.

[25] Funkhouser, William D., and Webb, William S., *The Chilton Site in Henry County Kentucky* (The University of Kentucky, *Reports in Archaeology and Anthropology*, III, No. 5, Lexington, July, 1937).

[26] Cadzow, Donald A., "Mr. George Fisher's Discoveries in Western Pennsylvania," in *The Pennsylvania Archaeologist*, III, No. 3 (January, 1933), pp. 3-5.

[27] Webb, William S., *An Archaeological Survey of the Norris Basin in Eastern Tennessee* (U. S. Bureau of American Ethnology, *Bulletin 118*, Washington, D. C., 1938), pp. 9 ff., 159 ff.

[28] Griffin, James B., *The Fort Ancient Aspect* . . . (Ann Arbor, Mich., 1943), pp. 305-6.

Hopewell "period";[29] 3) many of the stone slab mounds in the Middle Ohio Valley are Late Woodland.[30] The last position derives from the excavation of the Turpin Stone Mound in which a Woodland level was stratigraphically separated from a Fort Ancient component.

Ritchie[31] also recognized some basic relationship among many of the stone mounds in the Ohio Valley. He suggests that they are evidence of a "prolongation" of Adena.

In 1953, the writer indicated that at least one mound, the C. L. Lewis Stone Mound, was unquestionably Adena.[32] No further generalization was suggested, however.

Dragoo,[33] reporting on a stone mound which was excavated several years ago in Pennsylvania, concluded that it was Adena. At the same time, it was recognized that other structurally similar mounds in western Pennsylvania[34] were regarded as possessing Middle Woodland material traits and that both Adena and Hopewell peoples constructed this type of burial mound. A factor of some importance for Dragoo relates to the physical situation of the tumuli, with the suggestion that those on hilltops are Adena, while stone burial mounds on river terraces are Hopewellian.

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[29] Griffin, James B., "Cultural Change and Continuity in Eastern United States Archaeology," in *Man in Northeastern America*, edited by Frederick Johnson (Robert S. Peabody Foundation for Archaeology, *Papers*, III, Andover, Mass., 1946), pp. 55-56.

[30] Griffin, James B., "The Late Prehistoric Cultures of the Ohio Valley," in *Prehistoric Indians of the Ohio Valley* (The Ohio Archaeological and Historical Society, Columbus, 1952), p. 15.

[31] Ritchie, William A., *The Pre-Iroquoian Occupations of New York State* (Rochester Museum of Arts and Sciences, *Memoir No. 1*, Rochester, 1944), p. 324

[32] Kellar, James H., "The C. L. Lewis Stone Mound, Shelby County, Indiana," a paper read at the Annual Meeting of the Society for American Archaeology, University of Illinois, Urbana, 1953.

[33] Dragoo, Don W., "The Linn Mound, an Upper Ohio Valley Adena Stone Mound," in *The Pennsylvania Archaeologist*, XXV, No. 1 (January, 1955), pp. 68-69.

[34] Schmitt, Karl, "Archeological Chronology of the Middle Atlantic States," in *Archeology of Eastern United States*, edited by James B. Griffin (Chicago, 1952), p. 61.

Webb's and Baby's recent listing of Adena sites includes several stone mounds.[35] The published reports for two of these sites, Chilton and Burkam, were available in 1945 when Webb's *The Adena People* was published. Also, the Adena trait list is appended to include the "sub-rectangular bone gorget," which, with the exception of a comparable specimen from the Hopewell Site, has been recovered from stone mounds only.[36]

Most of the above considerations relate primarily to the Ohio Valley, but stone mounds occur much more widely.

Shetrone[37] has suggested that these mounds in the Missouri and Tennessee-Cumberland areas are simply a variation of local burial practices dependent upon the availability of raw materials. On the other hand, Whiteford[38] proposes that at least one stone mound from the latter area, Stiner Farm Stone Mound No. 2,[39] has no immediate counterpart in Tennessee and relationships may be present in the Ohio Valley. Jennings[40] has described a stone mound near Nashville, Tennessee, as showing Copena affiliations.

Material evidence is extremely scanty in Georgia, although stone mounds are common and a few stone effigy structures occur. Fairbanks[41] suggests these may belong to the Mossy Oak complex. Waring[42] equates the stone mounds with Copena and Adena-Hopewell.

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[35] Webb, William S., and Baby, Raymond S., *et al.*, *The Adena People, No. 2* (The Ohio Historical Society, 1957), p. 1 (Site A 177-B), p. 2 (Site 182).

[36] *Ibid.*, p. 30

[37] Shetrone, Henry C., *The Mound-Builders . . .* (New York and London, 1930), pp. 355, 441.

[38] Whiteford, Andrew H., "A Frame of Reference for the Archeology of Eastern Tennessee," in Griffin (ed.), *Archeology of Eastern United States*, pp. 209, 225.

[39] Webb, *An Archaeological Survey of the Norris Basin*, pp. 159-61.

[40] Jennings, Jesse D., "Hopewell-Copena Sites Near Nashville," in *American Antiquity*, XII, No. 2 (October, 1946), p. 126.

[41] Fairbanks, Charles H., "A General Survey of Southeastern Prehistory," in *The Florida Indian and His Neighbors*, edited by John W. Griffin (Winter Park, Fla., 1949), p. 62; Fairbanks, "Creek and Pre-Creek," in Griffin (ed.), *Archeology of Eastern United States*, pp. 286-87.

[42] Waring, A. J., Jr., "'Hopewellian' Elements in Northern Georgia," in *American Antiquity*, XI, No. 2 (October, 1945), pp. 119-21.

Kelly[43] hypothesized that the stone mounds, most excavations of which have produced nothing, are ancestral to the earth burial mound complex.

In Missouri, stone cairns are common in the east-central section. Chapman[44] has tentatively suggested a Late Woodland affiliation for many of these.

Stone heaps in the Dakotas have been variously interpreted by Will. In the Badlands they are found on the highest hills and buttes and these reportedly marked spots from which fresh water could be seen.[45] Evidence of encampments were found around the base of these heaps. One near Sanger, North Dakota, is said to be a "commemorative" place and others are said to have been constructed by the historic Mandan as a young man's place of vigilance.[46]

This brief survey of the literature relating to the place of stone mounds in the archaeology of the eastern United States generally, and the Ohio Valley specifically, reveals any number of positions that have been taken. Some of these are not incompatible with one another, while others are almost polar in nature. That this should be the case is partially explainable by the nature of the sites dealt with. With the exception of three sites, no village associatons are clearly discernible. Reference has already been made to the fragmentary nature of much of the data.

If we restrict comments to more recent statements, there are certain general areas of agreement, although some exceptions can be noted. There is a general feeling that stone mounds, at least in part, represent spatial and chronological continuity resulting from a unique historical situation; i.e., stone mounds are not simply a variation of burial construction wholly dependent upon the presence or absence of stone in a particular area. Also, there is a general agreement that these mounds exhibit characteristics which place them within the Woodland pattern. The chronological niche within this pattern is another problem and suggestions range from early to late.

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[43] Kelly, Arthur R., "The Eatonton Effigy Eagle Mounds and Related Stone Structures in Putnam County, Georgia," in *Georgia Mineral Newsletter*, VII, No. 2 (Atlanta, 1954), p. 86.

[44] Carl H. Chapman to James H. Kellar, December 26, 1955.

[45] Will, George F., "Observations Made in Northwestern South Dakota," in *American Anthropologist*, N. S., XI, No. 2 (April-June, 1909), pp. 258-59.

[46] Will, George F., *Archaeology of the Missouri Valley* (American Museum of Natural History, *Anthropological Papers*, XXII, Pt. 6, New York, 1924), p. 295.

STONE MOUNDS IN THE CENTRAL OHIO VALLEY

Two stone mounds, both in Hamilton County, Ohio, are important because of the abundance of material from each; but neither has been reported in detail. The first of these, Edwards Stone Mound No. 1, was excavated by Dr. Charles L. Metz for the Peabody Museum of American Archaeology and Ethnology in 1883. The Cincinnati Museum of Natural History excavated Turpin Stone Mound No. 2 in 1948-49. Both were situated on the terrace along the Little Miami River, the former about a mile and a half above Newtown near the Turner Site, and the latter about an equal distance below Newtown.

In a letter to Frederick W. Putnam in March, 1883, Metz writes:

> At the time when I was engaged in the exploration of the large Edwards Mound No. 22, Mr. Edwards called my attention to a mound situated on the higher portion of the first bottom of the Little Miami River, and on a direct line N. W. from mound No. 22 distant about 500 yards from it. On visiting the locality with Mr. Edwards I found the mound located about 100 yards from the river bank, on the higher portion of the plain, which is here elevated about 25 feet above low water mark of the river, and is not subject to inundation except at unusually high freshets of the river. The mound appeared about 2½ feet high, 100 feet in diameter N & S and measured 120 feet in length E & W. Mr. Edwards informed me that 60 years ago the mound was between 8 & 9 feet high, and was covered with the forest that also occupied all of the surrounding plain. Shortly after this time the land was cleared, and he himself scraped down part of the mound, requiring the earth to fill up a depression in the plain nearby. He removed about 4 feet of the earth from the top when he encountered stones and human remains, for 50 years past he has cultivated the mound annually, and during the period has removed quantities of stone from it, besides ploughing up many skeletons and other bones, however finding no relics.
>
> On March 8 we began exploration of the mound by making an excavation 15 ft. wide at the edge of the mound on the N.E. At a depth of 8 inches a layer of stone was found which extended upwards conforming to the slope of the sides of the mound. This stone was found to consist of from 4 to 7 courses being heavier in some places than in others and subsequently proved to extend entirely around the sides of the mound. The stones were of all sizes, from that not larger than a man's hand to that which can hardly be lifted. The larger stones were the hill limestones and were brought from the hills ¾ mi. distant, while the smaller were

> flat and water worn, and evidently were taken from the river and drift gravel beds nearby. They were disposed in regular layers, some care seems to have been taken in their arrangements, this was evident wherever we found them undisturbed. Near the surface of the mound many fragments of human and animal remains were found intermingled with stones that had been torn up by the plough. The men were instructed to completely uncover the stones all around the base. After this was done, a trench 25 ft. wide was begun on the N.E. side and was carried through the center of the mound.[1]

This does not make completely clear the structural content of the mound; however, the burial description discloses that slabs were present three feet nine inches below the disturbed surface near the center. Other human remains two feet in depth had been crushed by the stone fill.

The record of the excavation contained in Metz's letter does not note horizontal location within the mound, but other schematic data are given. Table 2 summarizes this information.

The field notes give no clear picture of burial context. Numbers 42 through 46 were apparently part of a mass deposit. However, there is no description of anything resembling a common prepared area for the reception of the bodies. Two burials, 41 and 48, were surrounded by "upright" slabs and 24 had a large slab placed vertically at the feet. Several others were apparently covered with notably larger slabs.

There is no statement suggesting the intentional fragmentation of human bone. Metz did report that the skeletal material was in very poor condition and instructions were requested for disposing of it.[2] However, it is possible that this could have resulted from disturbances and the weight of the stone.

Although it was impossible for Metz to determine the details of some of the burials, 41 and 46, consisting of the postcranial skele-

Continued p. 419

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[1] Charles L. Metz to Frederick W. Putnam, March, 1883, in files of the Peabody Museum of Archaeology and Ethnology, Harvard University. See also Frederick W. Putnam, "Report of the Curator," in Peabody Museum of American Archaeology and Ethnology, *Annual Report*, III (Cambridge, Mass., 1884), pp. 344-46.

[2] Charles L. Metz to Frederick W. Putnam, March 14, 1883, in files of the Peabody Museum of Archaeology and Ethnology, Harvard University.

Table 2. Edward's Stone Mound No. 1

Number	Position	Orientation	Length	Depth	Artifacts
1	ext	N	6′	14″	
2	ext	S			sherds, 2 cut bear jaws
3	flex	NE		18″	2 bear teeth
4				24″	
5	ext	NE	6′	10″	2 bone awls
6	ext	NE	5′ 8″		bone awl
7	(child beside No. 6)				bone awl
8	flex	N		18″	(marginal note indicates child was with it.)
9	ext	SE	5′ 8″	20″	bone awl, turtle shell, and sherds
10	ext	S	5′ 6″	15″	bone awl
11	(mostly destroyed by plow)				
12	ext	SE	5′ 6″	15″	bone awl
13	ext	NE	6′	20″	turtle shell
14	ext	E	(lower extremities absent)		
15	ext	E	5′	20″	
16	ext	E	5′ 6″		projectile point
17	ext	S	5′ 4″	22″	
18	ext	E	5′ 6″	12″	

Number	Position	Orientation	Length	Depth	Artifacts
19	ext	E			5 bear teeth, sherds
20	ext	E			
21	ext	S		14″	
22	ext	SE	5′ 6″		
23	flex				
24	ext	E	6′ 2″	52″	conch whorl, perforated conch shell ornaments, pentagonal slate pendant, two-hole rectanguloid bone gorget, 4 rectangular notched bone pendants, copper awl in bone handle, elk tooth pendant, rectangular slate gorget
25	flex				
26	flex				
27	ext	ESE		18″	
28		E	5′ 8″	16″	projectile point
29	ext	S			
30	ext	N	6′ 4″	36″	2 copper awls in bone handle
31	flex	N			shell
32	flex	NE			
33	flex	NE		28″	
34	flex	W		17″	projectile points, beaver incisor

Number	Position	Orientation	Length	Depth	Artifacts
35	flex	E	5′ 10″	24″	
36		E	8″		
37	ext	ENE	6′ 2″	20″	bone awl, projectile points, conch shell fragment, antler flaker, “natural stone”
38	flex	E		20″	
39	ext	ENE		18″	3 celts, elliptical pendant, projectile point, antler flaker, chert graver, “turkey” spur, “chipped stone”
40	ext	NE		18″	
41	ext	NE		26″	(skull absent)
42 43 44 45 46	“lay in a heap”				bird bone tube, 2 bone awls, antler tine
47	ext	NE		20″	
48	ext?	W	5′	24″	
49	flex	N		17″	
50	ext?	NE	5′	33″	
51	ext?	S	6′	24″	

Number	Position	Orientation	Length	Depth	Artifacts
52	ext	NE	5′ 6″	24″	
53	ext	W	5′ 5″	17″	
54	ext	SE	5′ 3″	16″	box turtle shell
55	ext	NE	5′ 2″		
56	flex	NE		39″	
57	flex	NE		36″	sherds, shell fragments
58	flex			33″	
59	flex	NE		24″	
60	flex			24″	
61					
62	ext	SE	5′ 10″	18″	
63	ext	S	5′ 5″	24″	(dog skeleton near by)
64	flex	E			bone awl, slate pendant, projectile point
65	flex	SE		45″	
66	flex			30″	
67	ext	E	5′ 6″	36″	bone bead, turtle shell
68	flex	SE		26″	
69	(skull only)				
70	ext	E	5′ 6″	18″	
71	flex			17″	

ton and skull, respectively, were clearly less than completely articulated.

Of the 71 numbered burials, the notes are sufficiently clear to identify with some degree of assurance 38 extended and 22 flexed primary inhumations. These latter were loose to fully flexed.

Less than a third of the burials had associated artifacts. Other artifacts are present in the collection, but these apparently were located at some point in the mound mass or with disturbed burials not given a separate number.

Burial 24, found in the approximate center of the mound with perhaps some initial preparation of the area, was accompanied by the greatest number of artifacts. A large conch whorl had been placed on the chest and below this was a pentagonal slate pendant. On either side of these were several cut and drilled sections of conch shell. The two-hole rectanguloid bone gorget was positioned inside and parallel to the right femur. Under this were four small rectangular pieces of cut and notched bone. "In the right hand" was a small copper awl set in a bone handle. The position of the drilled teeth and some broken shell is not given.

Two similarly made copper awls with bone handles were found with Burial 30, one of which was also in the right hand.

Projectile points from the mound are generally similar throughout, being relatively small, trianguloid with sides excurvate, and with corner or side notches. Three are triangular and stemless, with a straight base; but they are larger than the small Fort Ancient types found in the same area. Other chipped-stone types include a small graver and a short expanded-base drill.

Ground-stone artifacts were abundant. Among them were four celts, the one-hole pentagonal slate pendant, and a rectanguloid slate pendant with excurvate sides. Seven broken slate or limestone gorgets were either rectangular or elliptical. One of these had been drilled from one side; perforations in the remainder were biconical.

Beside the bone gorget, a bone beamer, one deer ulna awl, and several cannon- and splinter-bone awls were in the collection. There was no information regarding the provenience of the beamer. The two-hole bone gorget was missing, but a drawing of it was found in the field notes.

The seven bear canines had been cut or sawed obliquely through the roots in the same fashion as those in the two cut bear jaws found with Burial 2. This suggests that they may have been part of similar artifacts. Two small drilled canines were also recovered.

Antler was used for the manufacture of blunt-end flakers and several antler tines were found as burial inclusions and in concentrations of animal bone.

The floor of the mound on the south side was burned to a depth of two to three inches over an area 10 by 12 feet. A quantity of deer, elk, and bird bone came from the region as did 76 sherds. These sherds, combined with the few that came from burials, may be separated as follows:

70	body sherds, cord marked, grit tempered
9	rim sherds, flat lip, cord marked, grit tempered
8	body sherds, plain, grit tempered
4	rim sherds, flat lip, plain, grit tempered
4	body sherds, smoothed-over-cord marked, limestone tempered
1	rim sherd, thickened rim, limestone tempered

With the possible exception of the limestone-tempered material and two very thin, well-made grit-tempered sherds, the pottery is similar. The cord-marked and plain ones are of the same ware and are apparently from medium-size vessels. Pottery manufacture was by the coiling process; tempering material was fine to medium angular pieces of decomposed granite. The few rim sherds exhibited a methodically flattened lip. The pottery collection was insufficient to determine vessel shape except for the suggestion that there was a pronounced expansion in the upper middle diameter of the vessels.

Too few sherds of the smoothed-over-cord-marked limestone-tempered variety are present to permit a statement regarding the finished product. However, the large rim sherd is of interest because of its identity with the Adena "thickened lip."

The two extremely thin plain sherds were tempered with fine sand.

Putnam's comments regarding Edwards Stone Mound No. 1 are of interest. He writes:

> On the plain about the mound are evidences of the site of a former village, and the annual ploughing brings to light many animal remains, fragments of pottery, and stone implements of the same character as those from the mound. From this fact and from the character of the burials in the mound, as well as that of the objects found with the skeletons, and from the absence of the characteristic ornaments found with so many of the human remains in the Turner group and other ancient mounds of the Ohio valley, we are led to look upon this stone mound as the burial place of a tribe of Indians living in the region subsequent to the builders of the Turner mounds. The remains found in the stone mound, as a whole, indicate that the people here buried were closely connected with those who made the singular ashpits in the ancient cemetery near Madisonville. Limited explorations of a burial place further down the valley [Turpin?] . . . brought to light many implements and ornaments of stone, bone, shell and copper, as well as pottery, similar in character to those found in the Madisonville ashpits and in the stone mound. In connection with this burial place, the exploration of which has just begun, I will only state that the singular grooved implements made from the leg bones of the deer, so common in the Madisonville ashpits, have been found in this new place as well as in the stone mound.[3]

An effort was made in February, 1956, to relocate the village site and, consequently, the stone mound site. Although Mound 22 of the Edwards Group had been destroyed, its location could be approximated. Following Metz's direction, a site was located about 200 feet from the caving bank of Little Miami River. Flint chips, animal bone, calcined bone, and cord-marked grit-tempered sherds were collected. The latter were identical with those in the stone mound collection.

Putnam misinterpreted the data from Edwards Stone Mound No. 1. The pottery is not comparable to that from the Fort Ancient site, or sites, mentioned above. And with the exception of the bone beamer, the artifact assemblage has little in common with that from Madisonville. However, the sources of the confusion is readily apparent. The Turpin Site to which Putnam undoubtedly referred in the above citation has a Fort Ancient as well as a Woodland component. The latter is markedly like that from the Edwards Mound, and a failure to recognize the stratified nature of the Turpin Site could lead to the lumping of both units, and, consequently, to the assumption of a nonexistent relationship between Edwards and Madisonville.

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[3] Putnam, "Report of the Curator," in Peabody Museum of American Ethnology and Archaeology, *Annual Report*, III, 345-46.

The Turpin Site is a well-known Fort Ancient village, having been partially excavated by the Peabody Museum of American Archaeology and Ethnology in 1886. In 1947, while excavating the burial mound at the site, an earlier Woodland level was discovered beneath it. It was physically separated from the Fort Ancient materials by a sterile water-deposited layer of clay. The Woodland stone mound, though not covered by the sterile stratum, was generally below the Fort Ancient occupation and was unknown until cultivation accidentally displaced some of the slabs.

Materials from the site are only partially catalogued and the published report is semi-popular and, therefore, generalized.[4] However, a picture of the site and its contents can be obtained.

Artifacts recovered from the village included chipped-stone discs, bell pestles, full-grooved axes, cannon- and splinter-bone awls, a bone beamer, small sections of notched bird bone, drilled elk teeth pendants, drilled rectanguloid bone gorgets, and an unfinished ground-stone object reminiscent of an expanded-center gorget. Sherds were present in profusion. All these were from the Woodland component.

Little detail is available regarding the stone mound. It was observed that "burials were, for the most part, so fragmentary and in such a state of confusion that the numbers of individuals could not be determined with any degree of accuracy."[5] Both Fort Ancient and Woodland burials were thought to be present, but the former are all said to have been intrusive. Stone cists were constructed around the dead.

The Woodland inhumations were varied: primary extended and flexed, partially articulated, and secondary. Scattered fragments of human bone were found in the slab pile suggesting that this practice was intentional. This reflects a commonly observed trait in Ohio Valley stone mounds.

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[4] Oehler, Charles M., *Turpin Indians* (Cincinnati Museum of Natural History, *Popular Publications Series*, No. 1, 1950).

[5] *Ibid.*, p. 2.

Except for a single cord-marked pottery vessel, no information is presented for burial and artifact associations. Artifacts occurring in the mound included drilled rectanguloid bone gorgets, cannon-bone awls, two-hole rectangular slate gorgets, a part of a pentagonal slate pendant, a limestone hoe, large columella beads, a rabbit effigy pipe, a portion of a "pick-shaped" stone object, and an amorphous artifact of calcite resembling a broken spool. Also, an unusual "boatstone" was recovered. It was made of red sandstone, drilled, and had a truncated cone projecting from the side opposite the groove.

The Woodland pottery is fairly thin, well made, cord marked, and tempered with grit. Rims are straight with no secondary embellishment and the lip is flat. Vessel form is distinctive by reason of the marked expansion in the body of the pot which results in the presence of a sharp angular shoulder. The base is conoidal.

It cannot be stated with assurance that all of the enumerated artifacts from the stone mound belong to the period of its construction. The presence of a few Fort Ancient burials might argue that some of the artifacts may have had a similar origin. The rabbit effigy pipe is in concept much like a frog effigy removed from the Fort Ancient burial mound many years ago. However, most of the artifacts do differ from those associated with the later horizon.

It is apparent that the stone mound resulted from the activities of the village inhabitants. No burials were discovered in the occupational debris, indicating that the mound was the burial area. Also, pottery is identical in both units and similar artifacts occur in both.

Griffin has referred to the Turpin village and stone mound as the type site for the identification of the Newtown Focus, a Late Woodland expression in the middle Ohio Valley.[6]

The data from the above sites are important because individually and together they represent a sizeable body of material. As noted, one of the major deterrents to a summary of the spatial and chronological significance of stone mounds has been the lack of comparative material. Although this deficiency has not been completely overcome, a number of excavated stone mounds in the middle Ohio Valley have produced burials and artifact associations indicating a definite relationship with the Newtown sites.

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[6] Griffin, "The Late Prehistoric Cultures of the Ohio Valley," in *Prehistoric Indians of the Ohio Valley*, p. 15.

One of these related mounds for which there is a good description of burial practices is Burkam Stone Mound No. 1.[7] It was located in Dearborn County, Indiana, on a long upland spur elevated some 285 feet above the Ohio River flood plain. Three stone mounds and two earth mounds had at one time been present in the immediate area, but one of the former had been excavated and the earth mounds had been disturbed.

Burkam No. 1 was approximately 28 feet in diameter and 16 inches high. The major feature encountered in the mound was a "central sub-floor cist." Black describes it as follows:

> The central area had been excavated into the original surface to a depth of 7 inches. . . . Within this excavated area a slab floor was laid down measuring 5 feet 10 inches north and south by 3 feet east and west. Upon this floor the eight reburials and the calcined human bone representing the cremation were placed. The floored area was then lined with slabs to form the walls, and earth from the excavation, containing many bone fragments, was used to cover the burials as well as to fill in the unused section of the excavation to the south and east of the cist. . . . The central area was then covered and surrounded with slabs which made up the mound.[8]

No artifacts were found in association with the above secondary burials.

Beneath the human bones in the central area was a partial, articulated human burial consisting of the trunk. This and another incomplete human skeleton were the only remains exhibiting any articulation. All long bones in the central cist with but four exceptions had the proximal and distal joints removed. Also, the left portions of four human mandibles were present in the same concentration; the right corresponding parts were not found. Intentionally broken bone were seemingly scattered throughout the mound mass. This resulted from intent on the part of the mound's builders and not from some disturbance incident to later excavation.

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[7] Black, *Archaeological Survey of Dearborn and Ohio Counties*, pp. 231-40.

[8] *Ibid.*, pp. 236-37.

Adjacent to the cist at the northeast corner was a layer of burned clay overlaid by calcined slabs suggesting the former presence of an intense fire. To the south and east of the central area and at different levels so as to overlap were several deposits of bone, both human and animal. Dog was included among the latter. Small stone cists for the skeletal material had been constructed in some instances. Two isolated human skulls had been placed south and east of the central burial area.

As noted, no artifacts were found in the central area; but several were associated with concentrations of fragmentary human and animal bone, with partial articulated burials, or as isolated occurrences within the mound. These included the following: a cut bear jaw ornament, cannon- and splinter-bone awls, a rectanguloid bone gorget, an antler pendant, stemmed and notched points, straight-base triangular blade, lanceolate blade, argillite chopper, rectangular and rectanguloid slate gorgets, beaver incisors, a terrapin shell, and bird claws.

The slate gorget forms, bone gorget, cut bear jaws, projectile point forms, and awls have their counterparts in the Turpin and Edwards mounds. The concentrations of animal bones, including dog, burned area in the mound, and burial practices find analogies in the same sites, although the frequency of the secondary burials is unusual.

Burkam Stone Mound No. 2, slightly smaller than the preceding and containing in the way of artifacts only seven sherds, substantiated the observations made at Burkam No. 1.[9] It contained the well-prepared central area and a number of secondary burial deposits.

A possible variant of stone mound construction in Henry County, Kentucky, has been reported in detail.[10] The Chilton Site was located on a ridge some 250 feet above a small stream and was wholly a burial area. Burials were made in well-defined graves intruded into the subsoil with from two to eight burials in each unit. They are described thusly:

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[9] *Ibid.*, pp. 237-40.

[10] Funkhouser and Webb, *The Chilton Site in Henry County Kentucky*.

> Within each unit the individual graves were approximately parallel pits dug into the subsoil to various depths of a size to receive a body fully extended. After the deposit of the body in this manner, the grave was filled with earth, and, at about the level of the hardpan, a horizontal pavement of limestone slabs was laid to cover the grave area and to extend beyond it several feet in each direction. These stone-paved areas were approximately rectangular and of sufficient size to cover the total number of burials put in the unit. The stone in these paved areas were undressed-native limestone slabs of all sizes convenient to handle, and was carefully laid one, two or three layers deep. These pavements in some units had the appearance of having been laid all at once as a unit, but in a few instances it appeared that later burials may have been made near earlier burials in a unit and the stone pavement by additions to it extended to cover the new grave.[11]

Webb has added a further bit of information regarding the construction of the individual units. He writes: "We have considered these stone mounds for the reason that it would appear that a great many stones had been carried away from these areas [to be used] in the construction of farm roads and also by the farmer to remove obstructions in the way of cultivating the soil. Such areas . . . represent therefore only the remaining base of small stone mounds."[12]

Although the units were basically similar, there was some variation discerned. In one case, two burials had been made in a troughlike cist upon the stones covering the usual grave, and additional flat slabs were then placed over these. In another, multiple superimposed burials were found in a single pit. In all, thirty burials were recovered. One of these consisted of the legs, only, but they were extended in "correct anatomical order." Except for one loosely flexed, all the burials uncovered at this site were extended inhumations.

Secondary interment was also present. In the slabs above the pit containing the partial burial were some fragments of human bone and teeth. Also included were animal bones, some of which may have been dog. Two human mandibles were encountered in the slabs above another burial. The only artifact recovered in the stone covering was a rectanguloid two-hole bone gorget.

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[11] Funkhouser and Webb, *The Chilton Site,* pp. 175-76.

[12] William S. Webb to the author, October 15, 1954.

Even assuming that cultivation and construction had succeeded in removing a considerable quantity of stones from the individual units of the site, they are obviously unlike the stone mounds described previously insofar as the subfloor structures are concerned. However, the assemblage of artifacts accumulated from seven of the thirty burials is similar to those from the sites in Indiana and Ohio. They include, besides the bone gorget, cut animal jaw, drilled elk incisors, a two-hole rectanguloid slate gorget, corner-notched projectile points, a broken granitic celt, a beaver incisor, and copper and galena fragments. A sandstone elbow pipe is unusual.

The above five sites, though differing somewhat in the quality of the original description, appear to have significant similarities.

The relationship of Edwards Stone Mound No. 1 and the Turpin Stone Mound is eminently clear. Information from the former constitutes one of the larger assemblages of data. Though information for Turpin is somewhat unsatisfactory in some of the detail, this limitation is not critical. It seems certain that more rather than fewer parallels could be found between the two sites if greater explicitness were available.

Both are in comparable physical locations and separated from one another by only a few miles in the same river valley. The use of stone in the mound fill with the seeming presence of burial cists is viewed as identical in both. Extended articulated burials were in the majority at Edwards, but a significant number were loosely flexed. There is also the example of a "trophy" skull as well as a partial articulated burial. Flexed and extended primary interments were present at Turpin; secondary deposits, intentional fragmentation of human bone, and cremation occurred. Unquestionable artifact correlates are the rectanguloid two-hole slate gorgets, pentagonal slate pendants, cannon-bone awls, bone beads, and drilled elk teeth. Because the bone gorget is a relatively rare archaeological specimen, having been recoverd only from a stone mound context, its presence in both mounds is interpreted as being of primary importance.

There are other artifacts which are not identical in form but are suggestive of relationship. Conch shell was used at both sites, and the notched bone sections, small tubes at Turpin and small rectangular strips at Edwards, may have had a similar function, probably ornamental.

Pottery is also comparable except for a few sherds at Edwards, and only one of these, the Adena thickened rim, is clearly atypical. Although vessel shape could not be determined from the few sherds at Edwards, paste, surface treatment, rim, and lip were identical at the two sites.

The other sites described share many features, both in the more generalized areas of mound structure and burial customs as well as in explicit material traits.

The Burkam Mounds exhibited cremation, partial articulation, secondary inhumation, and intentional fragmentation. No complete primary interments were found. Burkam Stone Mound No. 1 contained cannon-bone awls, rectanguloid slate gorgets, and similar projectile point forms. Cut bear jaws were also found at Edwards. The pottery from Burkam Stone Mound No. 2 also is similar to that from Turpin and Edwards.

The Chilton Site had a partial articulated burial, a loosely flexed burial, and evidence of fragmentation of human bone in addition to the primary extended inhumations. Although it displayed the greatest burial divergency with its subfloor pits, its artifacts have much in common with those from the other sites. These include similar slate gorgets, cut animal jaws, and a typical bone gorget.

There are, or were, countless stone mounds in the central Ohio Valley and many have been excavated. Some of these produced little or no information; excavation reports for others lack detail. However, characteristics noted in the Edwards, Turpin, Burkam, and Chilton stone mounds are reflected in these accounts.

Two Indiana sites, Precht Mound[13] and the C. B. Martin Stone Mound, [14] although generally lacking artifacts, contained concentrations of secondary burials. A copper awl in an antler handle and a drilled elk tooth were said to have been recovered from O 11, a stone mound in Ohio County.[15]

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[13] Setzler, *The Archaeology of the Whitewater Valley*, pp. 501-2.

[14] *Ibid.*, p. 398.

Except for the Chilton Site, very little of a concrete nature has been reported from Kentucky. Wyman[16] describes two "circular graves" constructed of stone slabs. The central cists contained a large quantity of "detached" bone.

Innumerable stone mound excavations have been undertaken in Ohio. Some of these are difficult to evaluate, but a few are suggestive. In September, 1886, the Peabody Museum of American Archaeology and Ethnology excavated the Robinson Mound in Brown County.[17] It overlooked the Ohio River from the top of a high ridge. There is no indication of the height of the structure, but it covered an area 43 by 25 feet. Two slab-lined graves were found under this sod-covered heap of stones. The first of these contained an extended burial together with calcined bones from at least two other individuals. Associated with the human remains were a cut beaver jaw, a cut "wolf" jaw, a projectile point, four flint flakes, a box turtle shell, and two "points of deer bone." A few skull fragments, two teeth, and a piece of a rib were all that remained of a second burial. Artifacts in the second grave included eight perforated Olivella beads, a large drilled pearl, a piece of unidentified shell, a perforated bear canine, and a rectanguloid banded-slate gorget. The latter, of the two-hole variety, had been broken and four additional holes drilled, apparently to facilitate binding.

Fowke[18] reports on the excavation of eight stone mounds in the same county, seven of which were dug under his direction. Like the Robinson Mound, all of these were situated on the high hills bordering the Ohio River flood plain.

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[15] Black, *Archaeological Survey of Dearborn and Ohio Counties,* p. 210.

[16] Wyman, Jeffries, "Report of the Curator," in Peabody Museum of American Archaeology and Ethnology, *Annual Report,* I, No. 2 (Cambridge, Mass., 1876), pp. 13-14.

[17] Putnam, "Report of the Curator," in Peabody Museum of American Ethnology and Archaeology, *Annual Report,* III, 549-50.

[18] Three different publications contain substantially the same record of the several excavations: Thomas, Cyrus, "Report on the Mound Explorations of the Bureau of Ethnology," in U. S. Bureau of American Ethnology, *Annual Report,* 1890-91 (Washington, D. C., 1894), pp. 452-57; Fowke, Gerard, "Stone Graves in Brown County, Ohio," in *Ohio Archaeological and Historical Society Publications,* IX (Columbus, 1901), pp. 193-204; and Fowke, *Archaeological History of Ohio,* pp. 388-406.

Artifacts were rarely encountered. Those recovered included a "flat-stemmed pipe," a "copper spool-shaped ornament," a small celt, a small triangular point, the stem of a catlinite platform pipe, and possibly a concretion. The copper spool is said to differ somewhat from those found in earth mounds. Fowke does not state the nature of this difference.

Mound structure often included well-defined cists and slab floors. Extended burials, partially articulated remains, and secondary inhumations were noted. In describing stone mound number 4, Fowke makes the following observation:

> Fragmentary human bones were scattered all over this pavement; the leaning stones seem to have been set down directly on them. Pieces of skull were found at fourteen different points, indicating at least that number of interments. Each deposit of bones, however, was quite small; and in some places portions of skull, vertebrae, phalanges, ribs, etc., would be in contact within a space a few inches across. . . . A few bones of birds, to the size of a pheasant, and mammals as large as a fox, were found. . . .
>
> When the inclined stones at the east end were removed, human bones were found between the layers, several inches below the floor. It is difficult to understand how they got there, for the slabs were in as close contact as the unevenness of their surface would permit.[19]

Regarding another of these stone mounds, he writes:

> The large stone close to the east end of the grave had no connection with it, but seemed to belong to another burial, as flattened fragments of skull and other bones were found between it and a somewhat smaller slab that lay against it. Such finds as this were noted at scores of places throughout the stone portion of this burial place; and while in a few instances the peculiar position of the remains may be due to the slipping or settling of stones between which they occurred, it was plain that a majority of them were so placed intentionally. Often there would be no more than a handful of bones so interred—as if a dismembered skeleton had been carried in, piece-meal, at odd times.[20]

That there is a basic similarity among the mounds in Brown

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[19] Fowke, *Archaeological History of Ohio*, pp. 401-2.

[20] *Ibid.*, pp. 397-98.

County seems certain, although the data are not as complete as one might wish. Besides the presence of well-defined burial areas constructed of stone, there is the stated recognition of secondary inhumation and the placement of fragmentary human skeletal remains between the slabs. Many of the descriptions are reminiscent of the situations in the two Burkam stone mounds.

The artifacts, while few in number and not well described, are referable to Middle Woodland. Morgan has called them Hopewellian.[21]

During the summer of 1896, Moorehead[22] investigated more than a dozen of these hilltop stone mounds in adjacent Adams County; but the results, judging from the published account, were minimal. There is no suggestion of any internal stone-defined features in these mounds. The descriptions indicate that "decayed" human bone was the usual inclusion and cremations were observed in two instances. An interesting observation was made regarding three of these tumuli; Moorehead notes "the bodies, as in the case of all stone graves or mounds, lay upon the surface, had been covered with bark and stones heaped on top." The presence of bark is not usually reported. The only artifacts obtained were several "war points," bone needles, drills, and a bear canine, all of which were found near the shoulder of a badly decayed burial.

Without question one of the more spectacular archaeological sites in the eastern United States is Fort Ancient. Here, over three and a half miles of earth wall enclose an upland spur in Warren County, Ohio. Although both Hopewell and Fort Ancient occupations have been noted in association with the earthworks, their construction is generally attributed to the former. On the hill terraces outside and below the walls a number of slab cairns have been found. According to Moorehead, the quantity of stone involved in the individual cairns ranged from two to 460 "wagon loads."

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[21] Morgan, Richard G., "Outline of Cultures in the Ohio Region," in Griffin (ed.), *Archeology of Eastern United States,* pp. 84-85.

[22] Moorehead, "Field Work Carried on in the Muskingum, Scioto, and Ohio Valleys," in *Ohio Archaeological and Historical Society Publications,* V, 208-14.

Several of these were excavated.[23] Although the published accounts are general, the following are some of the observed characteristics. The stone piles seemingly were loose collections of slabs except in one instance where stone cists were described. Burials were common and intentional fragmentation is clearly indicated. At least three burials were in a flexed position. In another instance, a mass deposit contained the remains of at least a dozen individuals. Associated stone artifacts included "large" blades, projectile points, grooved axes and celts, drilled slate "ornaments," and flake knives. Polished bone beads, awls, and antler tines were recovered. Beads were also made of shell and copper. Drilled marine shells were also found. A pottery vessel and "decorated" and plain sherds were collected.

The absence of descriptive specificity is a serious deterrent for suggesting the relationship of these mounds. The presence of quantities of pottery and a whole vessel, even though unidentified, and flake knives, and the use of perforated marine shell ornaments are more typical of Middle Woodland. The burial practices suggest those at Turpin and possibly Burkam. If these cairns were constructed by the Woodland occupants as they undoubtedly were, and if they are culturally related to the Newtown Focus stone mounds as the writer thinks they are, Fort Ancient may well be late in the Middle Woodland period. Granted, the *ifs* emphasize the subjectivity of the conclusion.

All of the above sites are not far removed from the lower Little Miami River locus of the Newtown Focus. Although excavation coverage was poor, it would be difficult to identify them as Adena and a somewhat later chronological placement will be proposed. The Robinson Mound is markedly like those classed with Newtown.The others in Brown County and at Fort Ancient have some typical Middle Woodland traits, e.g., copper spool, platform pipe, and flint flake knives. These need not suggest any great temporal difference, however.

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[23] Moorehead, *Fort Ancient, The Great Prehistoric Earthwork*, and "Graves at Ft. Ancient," in *The American Antiquarian*, IX, No. 5 (September, 1887), pp. 295-300.

A site of some interest and importance is the Wright Group. It was located near Dublin, in Franklin County, Ohio, and was excavated by Shetrone.[24] It consisted of three earthworks, two circular and one rectangular. Within the area delimited by the latter was a small stone mound, the exploration of which was described as follows:

> Upon a fairly level but not greatly used floor or base, there had been erected a structure composed of clean clayey loam, 15 inches in depth at the center. Upon the floor or base, a thin covering of charred matter appeared, but no postmolds indicating a pre-structure of timbers, and no burials or other remains, were found. However, placed directly upon the top of the low earthen mound there had been deposited a total of 11 burials, of a very unusual nature. Instead of the usual cremated burials of the culture [Hopewell], or the alternate ordinary uncremated burials, the bones of the skeletons had been broken into fragments, and the little heaps resulting, in every way resembling the cremated burial, but unburned, were deposited simply and without accompanying artifacts, upon the surface of the soil.[25]

Over these were placed a quantity of large slabs and some earth.

In an earth mound within one of the circular enclosures were two cremated and two uncremated burials. These were in "stone graves." With the cremation were an "ocean shell container" and six flint flake knives. The primary burials, one of which was flexed, had associated a copper spool, a plain platform pipe, a slate gorget, a beaver incisor, flake knives, and mica.

A third mound, called the Krumm Mound since it was not on the Wright property, contained a "promiscuous lot of human skeletal remains" under stone slabs and "carelessly deposited partial skeletons, or reburials." Only a stemmed point was found with these. Shetrone concluded that the Krumm Mound was not rightly a part of the Wright Group, identified as Hopewell, because of the aberrant burial practices. This interpretation seems to be arbitary.

The important thing is there seems to be a major use of stone and secondary deposits of fragmented human bone in a good Hopewell context.

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[24] Shetrone, Henry C., "Exploration of the Wright Group of Pre-historic Earthworks," in *Ohio Archaeological and Historical Quarterly*, XXXIII, No. 4 (October, 1924), pp. 341-53.

[25] *Ibid.*, p. 346.

One of the "classic" Ohio Hopewell sites, the Turner Group, had associated with it archaeological features in the definition of which stone played an important part. Griffin[26] felt there was a genetic relationship between the use of stone at Turner and at the other more isolated stone mounds.

The features at Turner cannot be included within the range of stone mounds as here delimited, but some are suggestive of a related practice. Discussing the burials within the "Great Enclosure," Willoughby writes:

> The interments of the uncremated bodies were usually in comparatively shallow graves, many of which were carefully constructed and outlined with flat limestones set upright. In some instances, a wall was laid at the head and foot. . . . The bottoms of a few of the more carefully made graves were paved with flat stones, and upon this paving the body was extended, usually upon its back. . . . The graves were usually filled with earth, and covered with one or more layers of limestones, which in some instances extended beyond the limits of the grave. Other graves were filled with stones. Still others were without the side and end stones. These, however, were usually, but not always, partially or wholly covered with a layer of stones near the surface.[27]

Similar features were constructed for cremations. These would be rightly described as "graves" rather than mounds, although multiple courses of stone were sometimes used. Some of these are reminiscent of the pattern at the Chilton Site.

An interesting structural analogy occurs in Mound 12 of the Turner Group[28] and Edwards Stone Mound No. 2.[29] Both contained a major circular enclosure made up of large stones. Earth was used in the fill of the former, while the latter was made up almost wholly of stone.

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[26] Griffin, "Cultural Change and Continuity," in Johnson (ed.), *Man in Northeastern America*, pp. 55-56.

[27] Willoughby, Charles C., and Hooton, Earnest A., *The Turner Group of Earthworks, Hamilton County, Ohio* (Peabody Museum of American Archaeology and Ethnology, *Papers,* VIII, No. 3, Cambridge, Mass., 1922), pp. 14-15.

[28] *Ibid.*, pp. 80-85.

[29] Putnam, "Report of the Curator," in Peabody Museum of American Ethnology and Archaeology, *Annual Report,* III, 169-70.

In a letter from Metz to Putnam dated November 6, 1882, the following report was made: "I found three small mounds located to the westward of the group we have just explored [Turner] and just within the parallels shown on Whittlesey's chart. One, a stone mound, is located near the end of the graded way. . . ."[30]

A subsequent letter on March 21, 1884, indicated that in "looking up the stone mound near the Whittlesey Mound" two tumuli were noted west of the earthworks. An accompanying sketch places the mounds in a position corresponding to the location of the Marriott Group. Number 1 of the latter may be the stone mound referred to; it included many water-worn stones, which served as a covering for an earth mound. Typical Hopewell artifacts were recovered from the mound.[31]

Another stone-covered earth mound was formerly located on the eroding bank of the Little Miami River immediately north of the Turner Group.[32]

Although the preceding discussion does not exhaust the stone mound literature for the middle Ohio River Valley area, the remainder is either markedly deficient in description or uncritical in its inclusions. Such reports include those from the Snake Den Group in Pickaway County, Ohio,[33] the "Great Stone Mound" in Licking County, Ohio, which was forty to fifty feet high, [34] an 1817 interpretation of a Harrison County, Ohio, stone mound,[35] Atwater's listings of stone mound traits,[36] and Metz's report on Turpin Stone Mound No. 1.[37]

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[30] This letter and the following are on file in the Peabody Museum of Archaeology and Ethnology, Harvard University.

[31] Putnam, Frederick W., "The Marriott Mound, No. 1, and Its Contents," in Peabody Museum of American Archaeology and Ethnology, *Annual Report*, III (Cambridge, Mass., 1887), pp. 449-66.

[32] Willoughby and Hooton, *The Turner Group*, p. 5.

[33] Loveberry, Clarence, "Recent Discoveries," in *The Antiquarian*, I, Pt. 5 (May, 1897), pp. 139-40; Moorehead, "Report of Field Work in Various Portions of Ohio," in *Ohio Archaeological and Historical Society Publications*, VII, pp. 111-23.

[34] Dille, I., "Sketch of Ancient Earthworks," in Smithsonian Institution, *Annual Report*, 1866 (Washington, D. C., 1872), pp. 359-60.

[35] Lindley, Harlow (ed.), *Indiana as Seen by Early Travelers (Indiana Historical Collections*, I, Indianapolis, 1916), pp. 153-54.

If comments are restricted to Edwards Stone Mound No. 1, Turpin Stone Mound No. 2, Burkam Stone Mound No. 1, and the Chilton Site, it is the writer's conclusion that contextual and trait similarities are sufficiently numerous to warrant grouping them together. Following Griffin's nomenclature, these would be representative Newtown Focus sites. Although data are incomplete, it is certain that other stone mounds in the same area can be similarly identified; e.g., Burkam Stone Mound No. 2, O 11 in Ohio County, Indiana, as well as others in the Whitewater Valley, and the Robinson Mound.

A further conclusion regarding these middle Ohio Valley stone mounds is that they are Woodland both in burial practices and in the associated artifacts. However, because one has dealt largely with only a fragment of the culture, burial practices, the quantity and quality of the comparative material makes temporal considerations somewhat tenuous. Until the Turpin Site excavations, no categoric village associations had been reported. Also, the single reported instance of good horizontal stratigraphy comes from the same site. This example indicates that Newtown predates Fort Ancient, a conclusion that had already been deduced from typological analysis. Unfortunately, there are no C^{14} dates available for any of the stone mounds in the area of immediate concern. In other words, temporal placement must be based upon the cultural forms noted at the several sites and their relationship to materials in the same area.

It has been observed that the Burkam and Chilton sites have been identified by Dragoo[38] and Baby[39] as Adena. The writer has suggested that these plus Edwards and Turpin are culturally related. It would then follow that all must be Adena if the foregoing conclusion is accepted.

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[36] Atwater, "Description of the Antiquities Discovered in the State of Ohio and Other Western States," in American Antiquarian Society, *Transactions and Collections*, I, 184.

[37] Metz, Charles L., "Exploration of a Stone Mound, 1 Mile S. E. from Newtown, Hamilton County, Situated on the Lands of Mr. Johnson Turpin," in Field Notes of the Peabody Museum of Archaeology and Ethnology, Harvard University. This structure was seemingly constructed over a house floor.

In terms of the data presented, the C. L. Lewis Stone Mound, described earlier, is the only such structure that can be confidently attributed to Adena. It has been demostrated that almost every feature, burial practice, and artifact finds immediate parallels in Adena. These consist of data and materials that are individually diagnostic; taken as a whole, the characteristics are internally consistent with one another and with the Early Woodland burial complex, the validity of which has been confirmed by innumerable excavations.

The Newtown Focus stone mounds are notable for their lack of these diagnostic features. The absence of the more common Adena tomb types and stone, metal, and ceramic forms are factors of some importance. Also, the internal structure of the Lewis Mound with its central earth ring is not duplicated in any of the Newtown mounds. The identification of Burkam and Chilton as Adena can be viewed partially as resting on limited data and the Lewis Mound affiliations. Such identification is impossible when the Edwards and Turpin materials are brought to bear on the problem. The striking thing about these latter two sites is precisely that though in the heartland of Adena and almost within sight of major Adena burial mounds, they have few characteristics in common with Adena. In order to accommodate most stone mounds in Early Woodland, trait lists are used selectively or modified by the addition of new material.

The non-contemporaneity of Adena and the Newtown Focus is, admittedly, concluded from negative evidence; but the bulk of the material traits from the latter occur in other archaeological contexts and reflects at least a Middle Woodland derivation. The absence of the Adena expanded-center and reel-shaped gorgets and the presence of rectangular, rectanguloid, and pentagonal slate forms is confirmatory. The use of marine shells, conch whorls, and large drilled fragments for ornaments, the presence of copper awls set in bone and antler handles, and side- and corner-notched points are more suggestive of Middle than Early Woodland. The frequent occurrence of animal jaws, commonly bear, cut and squared on the ends and ground flat on the base of the mandible through the roots of the teeth, is more typical for the same horizon.

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[38] Dragoo, "The Linn Mound," in *The Pennsylvania Archaeologist*, XXV, No. 1, pp. 63-65.

[39] Webb and Baby, *The Adena People, No. 2*, pp. 1, 2.

An attempt to segregate some material traits that might be uniquely stone mound, resulted in the finding of only one. This is the rectanguloid two-hole bone gorget found at the Burkam, Chilton, Turpin, and Edwards sites. This artifact has undoubtedly been emphasized in the writer's thinking because of the somewhat exceptional nature of the specimen and its association with stone mounds. It is relevant to the Middle Woodland considerations to note that except for the highly ornate engraved surface, a duplicate of this artifact type was recovered at the Hopewell Site.[40]

Another bit of evidence derives from Young's[41] recent study of the skeletal material from the Burkam mounds. He concludes that the physical type represented is the same variety associated with Ohio Hopewell.

In looking for comparative material within the Newtown Focus distributional area, the Rogers Mound is of some interest. This tumulus was located in Boone County, Kentucky, and was excavated by the Barringer Museum.[42] The mound was not a stone mound. Rather, stone slab graves were incorporated in a low sandy clay tumulus. With the extended burials contained therein were rectanguloid slate gorgets, pentagonal slate pendants, perforated elk teeth, corner- and side-notched points, and a variety of bone awl. A dog burial was also recovered. The grit-tempered cord-marked pottery was comparable to that from the Edwards and Turpin sites. This artifact assemblage is similar to that from the Newtown Focus. Major exceptions are the somewhat less variable burial pattern, and the presence of a monitor pipe and flint flake knives found at Rogers. One complicated-stamp sherd was also recovered—probably Late Swift Creek.[43] This is undoubtedly a late Middle Woodland site; the positive correlation of traits between Rogers and Newtown reiterates a comparable derivation for the latter.

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[40] Moorehead, Warren K., *The Hopewell Mound Group of Ohio* (Field Museum of Natural History, *Anthropological Series,* VI, No. 5, Chicago, 1922), p. 160, fig. 59.

[41] Young, Joseph W., "Physical Affiliations of the Burkam Stone Mound People," Abstract, Indiana Academy of Science, *Proceedings,* 1958 (Indianapolis, 1959), p. 58.

[42] Crawford, Ellis, "The Rogers Site and Its Relation to Adena and Hopewell," a paper read at the Annual Meeting of the Society for American Archaeology (Salt Lake City, 1959). Robert Moody, one of the excavators of the site, made available photographs of the excavation.

The foregoing discussion precludes an Adena identification for the Newtown Focus stone mounds, and the Middle Woodland configuration for much of the assemblage is significant. If one takes into account Fowke's work in Brown County, Ohio, on the assumption that these stone mounds are related to Newtown, and some of them certainly are, the copper spool and broken platform pipe point towards Middle Woodland as do the cairns at Fort Ancient.

This relationship being established, consideration of the temporal placement and cultural association of the Newtown Focus can be subsumed by one of the following alternatives:

1. The Newtown Focus is Middle Woodland.
2. The Newtown Focus is representative of Middle Woodland continuity into Late Woodland in the central portion of the Ohio River Valley.

The beginning of Middle Woodland in this area is generally marked by the appearance of so-called Hopewell material traits. Along with these there seems to be associated a physical type different from that in Adena, which suggests a population movement. There is good evidence of continuity from Adena into Hopewell in many of the culture complexes, and differences frequently are those of degree rather than kind, with "classic" Hopewell exhibiting greater developmental complexity. Areal contacts, if not actually extended over those of Adena, were more productive of foreign raw materials, and multidirectional trade is indicated. There occurs increased elaboration in certain of the artifact forms along with an increasing devotion to nonsubsistence activities if the innumerable extensive Ohio earthworks classed as Hopewell can be used as examples. Whatever the economic base may have been, horticulture or a "primary forest efficiency," there is *a priori* evidence for some degree of individual specialization as well as culturally derived sanctions for activating group efforts. The differential treatment accorded individuals in burial mounds tends to support the assumption that a developed system of social stratification is operational. There is the further assumption that Hopewell societal structure has transcended a purely kin organization.

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[43] Dr. James B. Griffin, University of Michigan, drew the author's attention to this sherd.

The terminal point of this period and the beginning of Late Woodland has no such marker unless it be that the complexities of Hopewell are absent or modified. That some indigenous Woodland peoples contributed to the later Fort Ancient culture is obvious, but it is also certain that the direct contribution was not made by Hopewell. Therefore, there exists a diastem in our knowledge of the prehistory of the central Ohio Valley which has yet to be filled. Late Woodland is as yet undefined, and the immediate post-Hopewell period remains an archaeological unknown, except for such as the indistinctly perceived Intrusive Mound.

It is the conclusion of this writer that the Newtown Focus is not a representative Middle Woodland culture, neither developmentally nor in its "classic" form, and that it occurred somewhat later in time than the Ohio florescence. This conclusion derives from a number of lines of evidence.

1. The artifact forms tend to be somewhat less specialized and more reminiscent of the generalized Middle Woodland materials recovered from archaeological contexts to the east and north. Point Peninsula during its Middle Woodland phase is such an example, with its similarities to Newtown in slate gorgets and pendant forms, copper awls in antler handles, and the comparable use of conch shell. Of course, Newtown lacks those elements which give

the former its distinctiveness; e.g., carved antler combs, bone harpoons, etc. Mayer-Oakes'[44] summary of Middle Woodland in the several upper Ohio Valley subareas provides other examples. Somewhat nearer to the Newtown Focus geographical area, there are some similarities in artifact form with Intrusive Mound; although once again there are specializations absent from the former. In general, the developed craft specializations of Hopewell are absent in Newtown.

2. Intergroup contacts appear to be restricted in Newtown. The raw materials utilized for the manufacture of artifacts, both in burial and village contexts, were generally those available locally or in adjacent areas. Exceptions are few and consist of a few scraps of metal recovered at the Chilton Site, which is itself somewhat aberrant, and the more general use of marine shells for ornamentation.
3. The stone slab burial mounds of the Newtown Focus generally contain the remains of many individuals in what can be considered a small tumulus. Oehler points out that it was impossible to estimate the number of interments at Turpin because of the great profusion of human skeletal remains. There seemed to be no major burial or burials as in most earth mounds, and the well-defined tomb complexes were absent. Some of this may be the function of the material used in mound construction, but even where sharply defined burial areas have been noted, a multiplicity of human bone was recovered; e.g., Burkam mounds. Unlike earth mounds, the stone tumuli leave one with the impression that they were a repository for the general population rather than a reflection of status ranking reserved only for a special few. While cremation and secondary interment occur along with primary burial modes, and this may indicate differences in social position as might the differential artifact associations, the burial areas were obviously

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[44] Mayer-Oakes, William J., *Prehistory of the Upper Ohio Valley (Annals of the Carnegie Museum*, XXXIV, *Anthropological Series No. 2*, Pittsburgh, 1955).

accretionary with limited internal structural definition.

4. Although the knowledge of Newtown villages and their associations is extremely limited, there is as yet no evidence for associating the population with any of the major construction activities in the geographical area except for stone mounds. Even for the latter, construction efforts were minimal with no necessary implication of labor control and organization.

These factors, some of which are admittedly subject to stricture because they lack a strong empirical base, force a rejection of the notion of a "classic" Hopewell identity for the Newtown Focus. The absence of the more exotic artifact forms suggests that craft specialism is not well developed; inter-group relations are somewhat restricted; and the nature of the burial mounds indicate an attenuated system of social stratification. Although these are all probable conclusions, they do not determine whether Newtown is pre- or post-Hopewell or, perhaps, even an example of social stratification within the larger Ohio Hopewell society at some point in its history.

As regards the latter, several factors mitigate against this interpretation. First, though unpublished, there is an accumulating body of data for southwestern Ohio indicating that the Newtown occupation was extensive and intensive. Such well-known sites as Sand Ridge and Hahn's Field had components. Also, Raymond Baby reported to the writer that a number of related sites occur in the central portion of Ohio. Numbers of recognized Newtown or related sites within the Hopewell "heartland" suggest a separable cultural concatenation. Second, artifacts, particularly pottery, suggest a somewhat later time period. Admittedly, pottery collections from stone mounds are not impressive as to numbers, although several thousand Woodland sherds were recovered at Turpin. However, the writer is not aware of a single stamped or zoned sherd, the presence of which would suggest a closer relationship with Hopewell. Morgan[45] has stated that only 13 per cent of the sherds from the major Hopewell sites exhibit this specialized surface treatment; the remainder are generally grit tempered and cord marked or plain. But the absolute difference in decorative modes suggests temporal rather than social distance.

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[45] Morgan, "Outline of Cultures in the Ohio Region," in Griffin (ed.), *Archeology of Eastern United States*, p. 89.

Perhaps more convincing is that the Newtown pottery is apparently related to the Late Woodland ceramics in other sectors of the Ohio Valley, e.g., Lewis cord marked from southern Illinois.[46] Although there is probably some temporal difference between the Lewis complex and Newtown, with the latter somewhat earlier, there is ceramic distributional continuity between the two areas. Stone mounds are also associated with the Lewis Focus.

From this evidence, it is probable that Newtown is post-Hopewell, at least in so far as the "classic" expression is concerned. Whether one is inclined to designate this as late Middle Woodland or Late Woodland is a matter of emphasis. Lacking any abundance of material to define the latter, the problem is largely academic at the moment, though not unimportant.

It has been suggested that location may be of some importance in determining the relative age or cultural affiliation of the stone mounds.[47] Those on hilltops are Adena, while Middle Woodland stone mounds are located on river terraces. This hypothesis is invalid for the Newtown data; the structures are found in both situations. A quantitative difference is present in that the Edwards and Turpin stone mounds, located on low river terraces, contained significantly more burials than others in more elevated positions. The greater number of artifacts with the former was probably commensurate with that fact, but no qualitative differences were observable.

The fact that stone appears to have been a major raw material used for the construction of burial repositories at some Hopewell sites, e.g., Wright, Turner, and possibly Fort Ancient, establishes some datum for its use. To the contrary, stone does not seem to have been overly important in Adena for burial mound construction. The emphasis given this material resulted from the misidentification of the Burkam and Chilton sites. In the example offered by the C. L. Lewis Stone Mound, it seems probable that it represents an alternative method of burial mound construction. Perhaps it is significant that the mound is near what appears to be the extreme northwestern limit of the Adena distribution. Also, stone being present in the Ohio Valley, its periodic use does not suggest anything unusual. The Lewis Mound is also somewhat anamolous compared to other stone mounds in that the central ring is not duplicated in the later sites.

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[46] Cole, Fay-Cooper, *et al.*, *Kincaid, A Prehistoric Illinois Metropolis* (Chicago, 1951), pp. 178-80.

[47] Dragoo, "The Linn Mound," in *The Pennsylvania Archaeologist*, XXV, No. 1, p. 66.

The fact that there are many similarities in burial practices between the C. L. Lewis and Newtown stone mounds is interpreted as having little diagnostic value. These merely reflect patterns of burial disposal that persist through many centuries of the Woodland occupation. However, it does seem probable that in the later Hopewell horizons stone was utilized in the burial complex with increasing frequency. By Newtown times, the building of earth burial mounds had ceased and stone tumuli continue the burial mound tradition in the central Ohio Valley. The writer would guess that the Newtown stone mounds date no later than A.D. 1000.

Though not directly related to the present problem, one cannot help but reflect on the reasons for the disappearance of the complexities exhibited by Ohio Hopewell. Although not a completely new idea, Steward has hypothesized that "once state political, religious and military institutions are created, they exist of their own right and for their own sake as well as to serve the public."[48] In order to maintain the position of the institution, it requires not only the support of the society directly involved, but also demands the exploitation of outside resources. Once a limit is reached in economic exploitation, and this in turn is related to the technological level, the monolithic nature of the institution can no longer be supported.

The application of such an hypothesis to "classic" Ohio Hopewell is, of course, pure speculation. Viewed from the perspective of Woodland culture, however, the burial and earthwork complexes are exceptional and at their apogee were undoubtedly responsible for the consumption of considerable time, labor, and material resources. Yet, insofar as the archaeological data are valid, there is no direct evidence that some external intervention was responsible for the disappearance of these cultural elaborations. If Newtown can be accepted as being more or less typical for post-Hopewell in the middle Ohio Valley, these earlier complexities seem to be absent or markedly attenuated; but there is enough continuity to suggest that internal factors contributed to the gradual modification of the original culture configuration. Could it be that the institutional activities as exemplified by burial ceremonialism and geometric earthwork construction demanded so much for their maintenance that the economic base could no longer support them?

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[48] Stewart, Julian, and Faron, Louis C., *Native Peoples of South America* (New York, 1959), pp. 100-1.

Though perhaps never completely demonstrable from the archaeological perspective, some greater concern with the documentation of Hopewell economic activities in Ohio and adjacent areas might be fruitful.

STONE MOUNDS IN THE EASTERN UNITED STATES

INTRODUCTION

The relative chronological placement of the Newtown Focus, though important, accounts for only a portion of the total areal distribution of stone mounds. Outside the middle Ohio Valley, data are even more fragmentary. However, because it has been implied in some of the published statements that "stone mounds" represent an areally continuous, historically related expression of a major population movement, some considerations should be given to the distributional range.

THE SPATIAL DIMENSION

Stone mounds used as burial repositories occur over an extremely wide area in eastern North America.[1] If our data adequately reflect the total distributional range, cairns are found as far west as central Kansas and east almost to the shore of Chesapeake Bay. They are reported for southwestern Minnesota in the north and in the upland portions of the Gulf states. Analogous tumuli of unknown or questionable function were present in the Dakotas, in Ontario, and Connecticut. If those reported from British Columbia and Washington are included, the area of occurrence is continent-wide except for a major hiatus in the western mountains.

Except to affirm the presence of stone wherever these heaps are found, and one need not have recourse to archaeology to verify that fact, the over-all distributional picture is of little significance without additional information. It is true that the areal range, although cutting across the historic limits of several linguistic families, generally coincides with the territory of Algonquian-speaking groups. This may be interpreted as being of significance when the western occurrences are taken into account. Suggestive as this might appear, it is meaningless without control of temporal and cultural factors.

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[1] The Appendix, below, pp. 475-81, is a compilation of distributional data with bibliographical reference. Although there are undoubtedly gaps in the listing, most of the major sources are included.

Perhaps a more significant observation is that the distribution of stone mounds generally parallels that of the earth burial mound, especially when reference is made to reported concentration of the former which are known to have burial inclusions. These concentrations occur in the lower Missouri Valley, particularly in northeastern Kansas, south-central and southwestern Missouri; in the middle and upper Ohio River Valley; and many are reported for the Tennessee River Valley in its Middle and Upper sections. Kentucky, between two of the major valleys and across the river from Missouri, has stone mounds over most of its area.

The eastern mountain region from Pennsylvania to Georgia has many stone piles, although it has not been demonstrated that many in the latter state were burial tumuli.

There is the strong impression that most stone mounds occur in areas that were somewhat isolated physiographically. Although not exclusively the case, high knobs, ridges, and mountainous regions in the upland sections of eastern United States are a common locale. Of course, it was in these areas that stone could be obtained most readily. A few cairns do occur in river bottoms where the fill had to be carried some distance, but these are comparatively rare.

Other associations may be noted beside the purely locative one. Some stone mounds appear to have been situated on sites that had geometric earthworks as a part of the surface configuration. The Wright Group and Snake Den Group, both in Ohio, reflected this pattern, and the largest stone mound reported, formerly present in Licking County, Ohio, was surrounded by a low earth wall.

So-called hilltop "fortresses," too, had within their boundaries and on natural terraces outside the walls piles of stone which, in at least the examples at Fort Ancient, contained burials. Others were noted in Butler County, Flint Ridge, and at Glenford Fort. A similar association was noted at Mt. Carbon, West Virginia, [1a] as well as further to the south in South Carolina and Georgia. Embankments may be of earth or stone.

[1a] Here, in 1957, the author excavated in the workshop, stone walls, and "stone mounds." Material results were negative, except that one mound was recent and contained iron rails.

As to effigy structures, a stone mound was situated only a few feet from the Tarlton Cross Mound; a stone pile was connected to the "alligator" effigy; and The Great Serpent is described as having a stone heap within the oval at the head of the serpent. All of these are in Ohio.

Whether all of these were anything more than roughly analogous structures appearing similar because of the presence of stone, will never be known. Many have been destroyed and no reports were made. These few examples only emphasize that already noted: most stone mounds occur as isolated tumuli or in small groups situated on dominant elevations.

THE TEMPORAL DIMENSION

In an earlier section (pp. 402-5), reference was made to the accumulation of stone piles as "memorials," trail markers, and observation mounds. The validity of these assertions is not subject to verification on archaeological grounds. Accumulations of stone containing no human remains, artifacts, or other indications of the builder's intent may be assumed to have been motivated by something other than a desire to dispose of the dead. Such excavation experiences are not unusual. Assuming that these structures were aboriginal, and this cannot be assured in every instance because field clearing can result in the formation of "stone mounds," one might infer that the rationale is as suggested by the historic literature. However, this is an extremely tenuous conclusion if the only perspective is archaeological.

Historical documentation, though sometimes failing to designate ethnic group, indicates that stone mounds were constructed over the dead. Erminie Voegelin[2] lists such occurrences for the Chickasaw, Cherokee, Ojibway, Potawatomi, Iowa, Kansa, and Osage.

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[2] Voegelin, Erminie W., *Mortuary Customs of the Shawnee and Other Eastern Tribes* (Indiana Historical Society, *Prehistory Research Series*, II, No. 4, Indianapolis, March, 1944), pp. 348, 351-52.

Flannery[3] reports that the "passerby threw stones on graves" of the Santi and Saponi. Butler notes stone mounds over the dead for the Mohican, Scaticook, and Potatuck; other stone and brush heaps are listed but there is no suggestion that burials were contained therein.[4] Assiniboin and recent Crow graves were also said to have been covered with rocks.[5] Swanton[6] reports that a stone mound was constructed in the present century to inter a Mikasuki chief.

Despite the fact that historical documentation for stone burial mounds is relatively abundant, it still remains that of all the reported excavations only a few have produced materials inferentially attributable to the postcontact period. As noted previously, Moorehead discusses the presence of European trade goods in stone mounds in Ohio. Near Andrews, North Carolina, glass beads were recovered from a stone cairn, and an iron hatchet and glass beads are reported from a comparable structure in Fayette County, West Virginia.[7] A somewhat questionable occurrence in Tennessee concerns the recovery of metal "bells" upon which were engraved the initials, "J.R."[8] A red cedar post in a stone tumulus in Goodhue County, Minnesota, might be interpreted as indicating some recency.[9] Another nebulous report of finding a flint-lock rifle in a Missouri cairn was reported by Marshall.[10]

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[3] Flannery, Regina, *An Analysis of Coastal Algonquian Culture* (The Catholic University of America, *Anthropological Series No. 7*, Washington, D. C., 1939), p. 109.

[4] Butler, "The Brush or Stone Memorial Heaps of Southern New England," in Archeological Society of New England, *Bulletin 19*, p. 10.

[5] Maximilian, Prince of Wied, *Travels in the Interior of North America* (London, 1843), p. 205; Bushnell, David I., Jr., *Burials of the Algonquian, Siouan and Caddoan Tribes West of the Mississippi* (U. S. Bureau of American Ethnology, *Bulletin 83*, Washington, D. C., 1927), Plate 31.

[6] Swanton, "Social Organization and Social Usages of the Indians of the Creek Confederacy," in U. S. Bureau of American Ethnology, *Annual Report*, 1924-25, p. 397.

[7] Wainwright, Capt. Robert D., "A Summer's Archaeological Research," in *The Archaeological Bulletin*, V, No. 1 (Dana, Ind., January-February, 1914), p. 8; Thomas, "Report on the Mound Explorations," in U. S. Bureau of American Ethnology, *Annual Report*, 1890-91, p. 435.

[8] Dunning, E. O., "Account of Antiquities in Tennessee," in Smithsonian Institution, *Annual Report*, 1870 (Washington, D. C., 1871), p. 379.

All these date from an early period or constitute the oral statements of untrained observers, and this may be of some importance in attempting to evaluate their contribution. At the same time, it should be noted that most of these occurrences, problematic though they may be, are in areas where one might anticipate finding historic materials on the basis of the ethnographic information. Nevertheless, and in spite of Moorehead's strong assertion to the contrary, there is little in our documentation that requires a conclusion stressing the historic recency for many of the mounds.

Not only is this conclusion valid, but an examination of other reports fails to point in the direction of a clearly late non-Woodland affiliation. The Pierson Mound, Franklin County, Indiana, produced shell-tempered pottery, a strap handle, and small triangular points.[11] Because of structural peculiarities, the placement of secondary deposits of human bone in a hollowed depression in the bedrock, Dragoo[12] has suggested, probably correctly, that the site is more akin to the stone slab graves and is not a stone mound in the usual sense. Location, interment practices, and the pile of stones over the human remains are similar to the Woodland cairn features, however. The significant difference concerns artifacts. Perhaps we have the continuation of a culture complex into Fort Ancient.

In most of the areas where a reasonable quantity of stone mound data are available, they are no earlier than Middle Woodland and some are Late Woodland.

Throughout the upper Ohio Valley in West Virginia and southwestern Pennsylvania and on into northwestern Pennsylvania and northeastern Ohio, stone mounds are numerous. Schmitt,[13] summarizing excavations in Warren County, Pennsylvania, where both earth and stone were used in mound excavation, groups them together in the Thomas Focus, which is Middle Woodland. Carpenter[14] reported on the excavation of a number of sites in Erie and Crawford counties, Pennsylvania, related to Thomas, and concluded that the use of stone or earth in the mound fill was dependent upon the availability of material, because small earth mounds in the same region did not differ significantly in content from those in which lithic material was employed. Mayer-Oakes[15] has published a trait list for these sites. Carpenter[16] has also stated that these structures differ from stone cairns in the Ohio and Monongahela valleys

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[9] Aiton, J. F., "Stone Heaps at Red Wing," in Minnesota Historical Society, *Collections*, I (St. Paul, 1872), 147.

[10] Richard A. Marshall to author, January 4, 1956.

[11] Setzler, *The Archaeology of the Whitewater Valley*, pp. 500-10.

[12] Dragoo, "The Linn Mound," in *The Pennsylvania Archaeologist*, XXV, No. 1, p. 62.

[13] Schmitt, "Archeological Chronology of the Middle Atlantic States," in Griffin (ed.), *Archeology of Eastern United States*, p. 61.

Other sites in northeastern Ohio are comparable. Among the collections of the Peabody Museum of Archaeology and Ethnology is an assemblage derived from a stone mound in Stark County. A letter relating thereto could not be located and no information was obtained beyond that derived from the material except that the mound was four feet high. The artifacts were predominantly Middle Woodland. These included straight-stemmed and corner- and side-notched projectile points, several of which had bifurcated bases. Ground-stone objects were generally broken, but fragments were sufficient for identification: a celt, five rectanguloid slate gorgets, and a banded-slate pendant. One specimen appears to have been a geniculate bannerstone which fractured along the axis of the drilled hole and thereafter the margins were ground down to a sharp edge. Workmanship was poor in the retouched areas compared to the original.

Baldwin[17] describes similar artifacts from a stone mound in Geauga County, Ohio, in which a possible dog burial was also found.

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[14] Carpenter, Edmund S., "The Spartansburg Cairns," in *American Antiquity*, XX, Nos. 1-2 (1950), p. 40.

[15] Mayer-Oakes, *Prehistory of the Upper Ohio Valley*, pp. 64-65.

[16] Carpenter, Edmund S., "Tumuli in Southwestern Pennsylvania," in *American Antiquity*, XVI, No. 4 (April, 1951), pp. 344-45.

[17] Baldwin, Cornelius C., "Ancient Burial Cists in Northeastern Ohio," in Western Reserve and Northern Ohio Historical Society, *Tracts*, No. 56, April, 1882 (Cleveland, 1888), pp. 159-65.

Luther[18] reports a situation in Trumbull County, Ohio, in which no artifacts were found; but ashes and charcoal were recovered from the central area. This is similar to conditions in some of Carpenter's "Spartansburg Cairns."

The presence of two rocker-stamped Point Peninsula sherds in a Connecticut stone mound reflects the same relative chronological position.[19]

It appears that the bulk of the stone mounds in northwestern Pennsylvania and northeastern Ohio are related to Middle Woodland and can generally be subsumed by Schmitt's Thomas Focus.

Farther to the south in the Monongahela River Valley, the overall picture is not so well defined. Interpretations are complicated not only by the somewhat generalized nature of the artifact material from stone mounds, but also by the fact that the archaeological record reveals a relatively unspecialized material culture. The extremely rugged terrain undoubtedly was a limiting factor tending to prohibit population concentrations and contributing to the valley's marginal position as regards cultural development in the Ohio Valley proper.

Excavation reports for these Monongahela River Valley cairns have been made by Thomas,[20] Hayden,[21] and Cadzow.[22] Carpenter has summarized the reports for the first three and suggested that, ". . . in some imperfectly understood way the cairns probably relate to an as yet undefined phase of the Adena complex."[23] Dragoo,[24] reporting on the 1933 excavation of the Linn Mound, identified this stone mound as well as Cadzow's Pollack's Hill mound as Adena.

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[18] Luther, S. N. "Exploration of a Mound near Braceville, Trumbull County, Ohio," in Smithsonian Institution, *Annual Report*, 1881 (Washington, D. C., 1883), pp. 592-93.

[19] Glynn, Frank, "The Pilots Point Submerged Sites," in Archeological Society of Connecticut, *Bulletin No. 27* (New Haven, December, 1953), p. 13. Irving Rouse, of the Yale Peabody Museum, called the sherds at this site to the author's attention in a letter of October 5, 1959.

[20] Thomas, "Report on the Mound Explorations," in U. S. Bureau of American Ethnology, *Annual Report*, 1890-91, p. 497.

[21] Hayden, Harry, "Tumuli Burials Along Cheat River," in *The Pennsylvania Archaeologist*, XI, No. 1 (January, 1941), pp. 5-7.

[22] Cadzow, "Mr. George S. Fisher's Discoveries in Western Pennsylvania," in *The Pennsylvania Archaeologist*, III, pp. 3-5.

Except for burial practices (and the writer does not view interment practices as singularly diagnostic in eastern Woodland), the artifact collections are not specifically equateable on typological grounds with materials from the more productive stone mounds farther down the Ohio. Nor for that matter are they typically Adena. The Linn Mound produced somewhat crudely made side-notched, corner-notched, and stemmed points, side scrapers, a stone mortar, a bone awl tip, pitted stones, and a woodchuck incisor. Some Flint Ridge chalcedony was employed. Pollack's Hill artifacts include celts, a stone mortar, the same range of projectile points as above, drilled bear canines, bone fishhooks, and two rolled-copper beads. Obviously, the artifact assemblage is small and it appears to be a generalized Woodland in nature.

The Early Woodland identification for some of these tumuli is partially based on an analogy with assumed Adena stone mounds in the Ohio Valley proper. It is a conclusion of this study that the latter are in large part not Adena; therefore, the affiliation of the Monongahela-Cheat river cairns cannot be validated by reference to such sites as Burkam and Chilton. If the Early Woodland identification is substantiated, it would constitute an exception to the affiliation of structurally similar mounds in the general Ohio Valley area. In fact, there is evidence that some of the stone mounds in the Monongahela region may well be relatively late in Woodland. Mayer-Oakes[25] has pointed out that polished bone beads, a large number of which came from cairns reported by Hayden, are found typically in the Monongahela archaeological complex. The same is true for an obtuse-angled clay pipe similar to the Monyock pipes which occur in the same area.

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[23] Carpenter, "Tumuli in Southwestern Pennsylvania," in *American Antiquity*, XVI, No. 4, p. 345.

[24] Dragoo, "The Linn Mound," in *The Pennsylvania Archaeologist*, XXV, No. 1, pp. 68-69.

[25] Mayer-Oakes, *Prehistory of the Upper Ohio Valley*, p. 96.

The writer admits that he is unable to supply a satisfactory solution to the problem, but some reservations are retained as to the Adena designation. That the Monongahela and Cheat river valleys exhibit a degree of cultural marginality with no clearly defined Hopewellian Middle Woodland influence suggests that an attenuated burial mound complex is present. Perhaps Mayer-Oakes' placement of the area's stone mounds in Middle Woodland, and the writer would include Linn and Pollack's Hill stone mounds if for no other reason than convenience, appears quite reasonable in the light of the presence of some typically later artifacts. On the basis of published accounts, the chipped-stone collections from Linn and Pollack's Hill might easily be equated with that from the Watson Site, a West Virginia Middle Woodland location where a stone mound was also present. It has been dated at 506 A.D.±100.[26]

Stone mounds are not common in the lower Ohio Valley. Of course, available stone, though not completely absent, is markedly diminished in quantity over the middle and upper portions of the valley. A few cairns are reported from Kentucky, though none are known to occur in adjacent counties in Indiana. The single reliable excavation report comes from Pope County, Illinois.[27] Located on an upland ridge, small subfloor pits were lined and covered with slabs. A human tooth was found in one of the three excavated, but no other skeletal remains were found. It is stated that associated artifacts were similar to those found in the village, Pp 36, a Lewis village, and the cairns are identified as Late Woodland.

Elsewhere in the Southeast stone mounds are numerous, but information is scattered. There are, however, apparently good Woodland stone mound associations in Tennessee. The Stiner Farm Stone

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[26] Diethorn, Ward, *A Methane Proportional Counter System for Natural Radiocarbon Measurements* (U. S. Atomic Energy Commission, *Report N. Y. O.—6628*, Washington, D. C., 1956), p. 132. The sample was charcoal from a pit containing Watson Ware pottery at the base of the stone mound. Dragoo believes the sample would closely date the beginning of mound construction.

[27] Cole, *Kincaid, a Prehistoric Illinois Metropolis*, p. 177.

Mound No. 2 is such an example.[28] With the extended skeleton in the mound were a double-bowl sandstone pipe, a pentagonal slate pendant, portions of a cut bear maxilla, cut bear canines, corner-notched projectile points, and a mica fragment. Artifact similarities to the Middle Ohio Valley have been noted.[29]

Somewhat to the south and west of the Stiner Farm Stone Mound No. 2, in Cumberland County, a stone mound has been tested.[30] It measured 66 by 72 by 4 feet and was one of three such tumuli located on a mountain spur in the upper end of the Sequatchie River Valley. Although the excavation exploited only a fraction of the mound's potential, there seems to be no question that the tumulus was accretional with no well-defined central area.

Eight burials were recovered, one of which was partially flexed and the others were so badly crushed as to make observations impossible. Artifacts, though not clearly in direct association with burials, included three shell disc beads, a small T-shaped drill, stemmed and side-notched points, five tri-incurvate points, and some limestone-tempered sherds. A quarter of a pottery vessel was found near one of the burials and enough was present to permit reconstruction. It had a somewhat flaring rim, constricted neck, and a conoidal base. Cord marking had been impressed systematically over the body, but the neck and rim were plain. Circumferentially placed below the lip were a number of nodelike projections and a small strap handle was attached to one of the rim sections. Tempering medium was limestone.

The triangular projectile points are reminiscent of the Hamilton Focus and the sherds are related to the limestone-tempered Woodland series in Tennessee. However, nodes and strap handles are generally associated with Mississippian, although the latter feature has been suggested for Copena.[31] There is here the suggestion that a Woodland group is being influenced by Mississippian populations.

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[28] Webb, *An Archaeological Survey of the Norris Basin*, pp. 159-61.

[29] Whiteford, "A Frame of Reference for the Archeology of Eastern Tennessee," in Griffin (ed.), *Archeology of Eastern United States*, pp. 209, 225.

[30] Field Notes, Chattanooga Chapter, Tennessee Archaeological Society.

[31] Webb, William S., and DeJarnette, David L., *An Archeological Survey of Pickwick Basin in the Adjacent Portions of the States of Alabama, Mississippi, and Tennessee* (U. S. Bureau of American Ethnology, *Bulletin 129*, Washington, D. C., 1942), p. 305.

About 175 miles west of the preceding, in Decatur County but still in the Tennessee River Valley, nine stone mounds were reported.[32] All were on upland ridges and ranged in size from 10 to 50 feet in diameter. Excavation results from four of these were not encouraging, but they did produce some material.

At least two flexed skeletons were recorded and secondary deposits are suggested in the field notes, but remains were so badly crushed or disturbed by subsequent interments that interpretation was difficult. Artifacts recovered included the following: disc shell beads, a broken projectile point, a plain limestone-tempered sherd, and a molar identified as bison. Also found was a thick almost square shell ornament, probably marine, drilled conically on two opposite sides. A deposit of red ochre was near one of the burials.

There is insufficient material from these sites to suggest chronological placement except that they are Woodland and are probably related to Kneberg's Middle Valley Aspect. Though traits are generalized, there are similarities to some of the Missouri cairns.

Farther to the southeast, in Georgia, stone mounds occur in almost every county north of the "fall line." In the northern tier of counties where local relief is great they are commonly found on mountain ridges. The same is true for the adjacent areas in the Carolinas. Farther south they are frequently over the break of the rolling terrain along streams. Seemingly random groups of fifteen or twenty are common. Although many could not have covered a human burial, some may be fifty or more feet in diameter.

Many of these tumuli have been investigated, but results have been negative in most instances. Field-clearing operations may account for some of the thousands of stone piles, but the unsystematic arrangement of many of the groups could not have provided additional cultivatable land and many locations appear at present to have been unsuited for agriculture in the beginning.

Kent[33] reports human bone, an eagle effigy pipe, an anthropomorphic pipe, and a soapstone ring from stone mounds. One in

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[32] Field Notes, Department of Anthropology, University of Tennessee.

[33] Kent, Benjamin W., "Mounds in Putnam County, Georgia," in Smithsonian Institution, *Annual Report*, 1882 (Washington, D. C., 1883), p. 770.

Lumpkin County produced a quartzite point and some chert flakes.[34] The well-known Shaw Mound near Cartersville contained a burial and sheets of mica, copper artifacts in the form of a breastplate, a cut-out design, and a celt, and two stone celts. These last are exceptional.[35]

Lacking any significant body of data from these structures, effort has been directed to making a surface survey in Putnam County where stone mounds are numerous and where the stone effigy "eagle" is an attraction. A predominance of Archaic sites have been recorded, generally Old Quartz. Others are Lamar. Attempting to integrate this information and assuming that the absence of bone in the mounds is a function of antiquity, Kelly suggests the following: "We may be on the cultural periphery of the Adena-Hopewell development, yet it is theoretically possible, of course, that the beginnings of the burial mound culture actually took place in the south; and that there were stone burials mounds, and possibly cave tomb burials before there were earth mounds."[36]

The implied chronological placement of these far southeastern stone mounds is of interest. If Kent's report can be accepted, the artifacts he lists are not "early," nor does the Shaw Mound material suggest such an interpretation. The abundance of copper is more suggestive of the near-by Etowah, although this cannot be affirmed on stylistic grounds. Waring[37] views the site as reflecting a Copena-Adena-Hopewell culture level. As regards Kelly's hypothesis, the cross-ties between Middle Woodland in the north and Early Swift Creek in the south indicate that the burial mound tradition is fully developed in the former area and Georgia is marginal to both the southern Mississippi and Ohio Valley configuration. In actuality, the Shaw Mound is the only stone mound which has produced any significant data in Georgia despite excavations for more.

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[34] Field Notes, Laboratory of Archaeology, University of Georgia.

[35] Waring, " 'Hopewellian' Elements in Northern Georgia," in *American Antiquity*, XI, No. 2, p. 119.

[36] Kelly, "The Eatonton Effigy Eagle Mounds and Related Stone Structures in Putnam County, Georgia," in *Georgia Mineral Newsletter*, VII, No. 2, p. 86.

[37] Waring, " 'Hopewellian' Elements in Northern Georgia," in *American Antiquity*, XI, No. 2, pp. 119-20.

Another major area of stone mound occurrence is in the rough uplands of Missouri south of the Missouri River, and Chapman[38] has tentatively concluded that many of these sites are Late Woodland. Marshall, reporting on the excavation of a stone mound in Delaware County, suggests that the Delaware Bridge cairn belongs "to a phase of the Late Woodland or to a degenerate Middle Woodland group . . .," and that the material, particularly projectile points and pottery, are referable to known Missouri material.[39]

The Missouri cairns are generally located on elevated positions and often occur in small groups. Size is variable; but a diameter of 15 to 20 feet is common, though a ridge 120 feet in length was reported to have been covered with slabs to a depth of several feet.[40] Cistlike prepared areas are a common structural feature.

The following summarizes data from two stone mounds reported by the University of Missouri, and tends to confirm Fowke's[41] earlier work in similar tumuli:

- Burials
  - extended
  - partially flexed
  - bundle reburials
  - cremation
  - "trophy" skulls
- Chipped Stone
  - side-notched points
  - corner-notched points
  - triangular point
  - "turtle-back" scrapers
  - ovate blade
- Bone and Shell
  - drilled deer phalange
  - cut animal canines
  - antler tine
  - splinter bone awls
  - drilled pearl
  - disc shell beads
  - tubular shell beads
  - perforated snail shells
- Pottery
  - plain, limestone tempered
  - plain, shell tempered
- Ground Stone—celt

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[38] Carl H. Chapman to James H. Kellar, December 26, 1955.

[39] Marshall, Richard A., "The Delaware Bridge Cairn, 23CN13," MS, University of Missouri.

[40] Hardy, George L., and Scheetz, Fred B., "Mounds in Ralls County, Missouri," in Smithsonian Institution, *Annual Report*, 1881 (Washington, D. C., 1883), p. 535.

[41] Fowke, Gerard, "Explorations in the Ozark Region of Central Missouri" (U. S. Bureau of American Ethnology, *Bulletin 76*, Washington, D. C., 1922), pp. 87-88.

There remains the problem of the relationship of the stone cairns and the earth mounds in which stone vaults were constructed. Although overlapping to a degree, the distribution of stone mounds tends to be south of the stone-chambered earth mounds. Also, the former do not contain the Hopewellian artifact specializations associated with the latter. Distributional and artifact differences do not suggest any direct relationships between the two. In fact, the limited data from cairns are more suggestive of the persistence into Late Woodland of practices attributable to the Boone Focus populations.[42]

Farther to the west in Kansas scattered stone mounds are reported. Shippee[43] describes one from which copper and disc shell beads and a tubular conch shell bead were recovered. "Woodland" projectile points were also found. Smith[44] reports others, but excavations have indicated only that they were burial tumuli.

While not exhausting the literature, the preceding discussion does indicate the nature and kinds of information available for the stone mounds of the eastern United States.

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[42] Chapman, Carl H., "Culture Sequence in the Lower Missouri Valley," in Griffin (ed.), *Archeology of Eastern United States*, pp. 140-41.

[43] J. M. Shippee to James H. Kellar, March 21, 1956. See also Missouri Archaeological Society, *Newsletter*, No. 98 (January 14, 1956), pp. 7-8.

[44] Smith, Carlyle S., "Archaeological Investigations in Ellsworth and Rice Counties, Kansas," in *American Antiquity*, XIV, No. 4, Pt. 1 (April, 1949), p. 298.

SUMMARY AND CONCLUSIONS

Although publications relative to the distribution of burial mounds constructed of stone are numerous, description of content is meager. This is as much dependent upon the nature of the sites with their paucity of artifacts as it is on the sketchiness of the earlier reports upon which one is partially dependent. Notwithstanding, certain conclusions can be extrapolated.

The ethnographic literature makes reference to the accumulation of stone heaps as an element of proto-historic or historic American Indian burial practice. However, the archaeological record provides no sufficiently convincing body of evidence that this explanation can account for any great number of the hundreds of stone tumuli in the Eastern United States. In general, excavation reports align the majority with Woodland and place them well within a prehistoric context.

The central Ohio Valley area, because of the heavy concentration of stone mounds and the fact that several have produced more than the usual amount of material, is of major concern. One of these, the C. L. Lewis Stone Mound, a detailed description of which was one of the major motivations for the study, is clearly Adena; but this identification is not typical for the remainder. There is only scattered evidence that this Early Woodland burial complex included the use of stone, and the material apparently was never employed with consistency. Certainly, stone mounds do not loom large in any consideration of Adena.

On the other hand, there are in the Ohio region a number of stone tumuli possessing sufficient structural, burial, and artifact correlates to warrant a conclusion of cultural relatedness. One of these, the Woodland component at the Turpin Site, has been proposed earlier as the type site for the Newtown Focus. The collections from Edwards Stone Mound No. 1 and Burkam Stone Mound No. 1 are additional related components. The Chilton Site, though differing somewhat in inhumation practices, nevertheless is closely related to the above in the range of associated artifacts. By extension of the patterns described for these sites, other stone mounds in southeastern Indiana, south-central Ohio, and northern Kentucky undoubtedly can be included.

Viewed from the perspective of Hopewell, these stone mounds and the one associated village exhibit some characteristics which are similar; but pottery and structural-functional considerations suggest the Newtown Focus is later in time. The presence in the same area of Hopewell sites in which stone was used extensively is further suggestive of the cultural continuity that exists. However, the patterning of stone mound construction in the later period indicates that these tumuli are more or less diagnostic for Newtown and continue the burial mound tradition. There is also the likelihood that the later structures were not burial sites restricted to the special few as appears to be the case in earlier periods.

Elsewhere in the Ohio Valley and on its upper tributaries, cairns were present in number. In the northeastern section they appear to be simple variations, with both earth and stone being employed and with no observable significant differences in mound content. A Middle Woodland level is represented. Although two tumuli have been identified as Adena in the Monongahela River area, some of the artifact associations are suggestive of a later Woodland occupation for other of the mounds.

In the lower Ohio Valley, the Lewis occupation in Illinois, which is similar in habitation pattern to that of Newtown, is clearly Late Woodland. Cairns, though present, are few in number and not well known.

These considerations account for only a portion of the total distributional area, but the temporal position of many of the reported sites is largely unperceived. However, as more specificity accumulates as to mound content, the materials tend to take their place in regional contexts. This is certainly true in Missouri, where many of the cairns show continuation of practices well established in the Boone Focus, though artifacts are indicative of Late Woodland. The situation in Tennessee is similar in that pottery, for example, is explainable in terms of local varieties. The Stiner Farm Mounds do have interesting artifact parallels with more northern stone mound content, but this is largely a Middle Woodland picture rather than being explicitly "stone mound."

Despite information limitations, or perhaps because of them, interpretive statements regarding stone mounds range wide over the archaeological spectrum. The chapter on "The Stone Mound Problem" has attempted to make explicit some of these hypotheses. A common one has been that stone mounds are evidence for a major population movement and/or a specific example of culture diffusion in the Eastern United States.

Upon the initiation of this study, conversation, correspondence, and some of the literature revealed a tendency to lump together archaeological manifestations on the basis of their lithic content with the assumption all were derived from the same cultural source. These included the presence of stone walls in earth mounds, stone layers over earth mounds, stone inclusions as structural elements within earth walls, stone walls, stone circles, stone effigy piles, burnt stone piles, stone crematories, slab-lined graves, as well as stone mounds or cairns. Although some of these may be positively correlated, the lumping together of disparate archaeological manifestations results not from any positive criteria indicating genetic relationship; it follows from the dearth of information, which makes the lithic content loom large in the total picture. Needless to say, stone is a common feature of the natural landscape, and man might be expected to take advantage of its presence for a variety of functions.

Lacking more explicit information, the presence of stone in mound fill has tended to be emphasized. This combined with the few derived artifacts, often somewhat generalized, has had a tendency to cause investigators to view stone mounds as a whole, rather than as a specific regional problem. This is not as true at present as it was some years ago, but the tendency still persists.

The data collected for this study do not provide a firm basis for suggesting that the presence of stone mounds is *a priori* evidence of any major population movement into their area of occurrence. Nor do they indicate the intrusion of any pronounced new culture element into a specific region. Their distribution tends to conform to the spatial dimension of earth burial mounds except, of course, in regions where quantities of loose stone were not readily available. The spatial association as well as the cultural, generally Woodland, suggests that stone mounds can be viewed as representative of the general burial mound tradition.

There is a general physiographic relationship, which may be of some significance. Major concentrations of these sites are frequently found in regions that are somewhat isolated by rugged terrains. A partial explanation is, of course, that stone was more accessible in the old eroded eastern uplands than in the river bottoms. However, it may be also that the imposed marginality of these situations with a consequent minimization of population concentrations and culture growth had some influence in the adaptation of the mound-building tradition to local situations. Specific reference is made to the Tennessee and Missouri examples, but it might also apply to most of the other areas as well. Instead of diffusion, perhaps there may be some examples of convergence.

Whatever the situation, it is concluded that "stone mound" as a culture trait has no special significance in the broad framework of eastern United States prehistory. Regional interpretations provide no evidence of extreme antiquity, which fact could lead to the conclusion that they were representative of the ancestry of the burial mound tradition. That many appear to be Middle Woodland or somewhat later horizons might be anticipated. It was during this period that tumuli burial spread most widely, and it seems likely that the stone mound is a differential response within the framework of this tradition. Some suggestion of this is contained in the fact that "stone mounds" accumulated in the historic as well as most levels of the prehistoric from Early Woodland to Late Woodland.

It may be that in the Ohio Valley stone mounds in the extreme northeast are somewhat earlier than are those of the Newtown Focus. However, the Middle Woodland content of both suggests only that they share in the same broad cultural practices. It does not indicate any direct and specific influence of one upon the other.

One, perhaps, should conclude by making a plea for more stone mound excavations. There is no question that Moorehead's 1896 assertion "that scientists can learn nothing more from them and further excavations of these small stone structures are unnecessary" is premature by several decades.

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